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USATHAMA

U.S. Army Toxic and Hazardous Materials Agency

TOOELE ARMY DEPOT
PRELIMINARY ASSESSMENT/SITE INVESTIGATION
FINAL REPORT

VOLUME II - SOUTH AREA

APPENDIXES



DECEMBER 1988

PREPARED FOR:

U. S. ARMY TOXIC AND HAZARDOUS MATERIALS AGENCY
INSTALLATION RESTORATION DIVISION
ABERDEEN PROVING GROUND, MARYLAND 21010-5401

BY:

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.
HUNT VALLEY/LOVETON CENTER
15 LOVETON CIRCLE
SPARKS, MARYLAND 21152

UNDER:

CONTRACT NO. DAAA15-86-D-0002
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FINAL REPORT

**PRELIMINARY ASSESSMENT/SITE INVESTIGATION
TOOELE ARMY DEPOT, UTAH**

VOLUME II - SOUTH AREA

APPENDIXES

Prepared for

U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland 21010

Prepared by

EA Engineering, Science, and Technology, Inc.
15 Loveton Circle
Sparks, Maryland 21152

December 1988

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Attachment For	
Title Serial	
Date Issued	
Distribution	
Classification	
By Distribution/	
Availability Codes	
Well and/or	
Dist	Special
A-1	

APPENDIX II-A

**ANALYTICAL DATA FOR DRILLING/DECONTAMINATION WATER:
SUPPLY WELL NOS. 3 (N-TEAD) AND 2 (S-TEAD)**



ENVIRODYNE
ENGINEERS

10161 Lachend Road
St. Louis, Missouri 63146
(314) 434-6900

February 26, 1986
3060-364

RECEIVED MAR 03 1986

Ms. Linda McConnell
EA Engineering Science & Technology, Inc.
15 Loveton Circle
Sparks, MD 21152

Dear Ms. McConnell:

Enclosed are the results of analysis of two water samples from Tooele Army Depot. The samples were received January 18, 1986. Table 1 contains the results for the samples as well as the method blank and three control spikes analyzed with the lot. Table 2 contains data that will be needed to enter the results into the USATHAMA data management system. All parameters analyzed for Tooele and Lake City are listed in Table 2, so some parameters may be listed that were not required on your samples.

I have also enclosed copies of all control charts for the analyses performed as well as comments from our review of the charts. A copy of the charts and comments should be forwarded to USATHAMA for their review and approval.

Please contact me if you have any questions concerning this report or if you need additional information.

Sincerely,

Judy Stone

Judith L. Stone
Project Manager

JLS/csg
Enclosures

ANALYTICAL RESULTS (VOA)

Instrument: #21

Project No./Client 3060-364/EA Engineers/Tooele Date February 18, 1986 Page 1 of 2
Well Well

site	////	QCMB	2	3			
lab no.	////						
frn no.	////						
analysis date	////	1-25-86	1-25-86	1-25-86			
analysis time	////						
analyst initials	////	BAK	BAK	BAK			
acrolein	100	ACROLN					
acrylonitrile	100	ACRYLO					
benzene	10	C6H6					
bromoform	20	CHBr3					
carbon tetrachloride	30	CCL4					
chlorobenzene	10	CLC6H5					
chlorodibromomethane	10	DBRCLM					
chloroethane	30	C2H5CL					
2-chloroethylvinyl ether	20	2CLEVE					
chloroform	10	CHCl3					
dichlorobromomethane	20	BRDCIM					
1,1-dichloroethane	20	11DCLE					
1,2-dichloroethane	20	12DCLE					
1,1-dichloroethylene	20	11DCE					
1,2-dichloropropane	20	12DCLP					
1,3-dichloropropylene	10	13DCP					
ethylbenzene	10	ETC6H5					
methyl bromide	30	CH3BR					
methyl chloride	10	CH3CL					
ethylene chloride	10	CH2CL2	5	8	4		
1,1,2,2-tetrachloroethane	10	TCLEA					
tetrachloroethylene	10	TCLEE					
toluene	10	MEC6H5					
1,2-trans-dichloroethylene	20	T12DCE					
1,1,1-trichloroethane	20	111TCE					
1,1,2-trichloroethane	20	112TCE					
trichloroethylene	10	TRCLE					
trichlorofluoromethane	50	CCL3F					
vinyl chloride	30	C2H3CL		-			

VOA SURROGATES

Spike level	Units					
d ₄ -1,2-dichloroethane	12DCD4					
d ₅ -toluene	MECSDB					
p-BFB	PBFB					

NOTE: All results reported in ug/l unless otherwise noted.
Where no value appears, the compound was not detected.

ANALYTICAL RESULTS (BNA) Instrument: #22

Project No./Client 3060-364 EA Engineers/Tooele Date February 18, 1986 Page 2 of 2

Site		NA	SA	QCMB		
lab no.	////	Well 3	Well 2			
frn no.	////					
analysis date	////	1-30-86	1-30-86	1-30-86		
analysis time	////					
analyst initials	////	LMC	LMC	LMC		
18 acenaphthene	ANAPNE	150				
29 acenaphthylene	ANAPYL	100				
38 anthracene*	ANTRC	100				
48 benzidine	BENZID	700				
58 benzo(a)anthracene*	BAANTR	100				
68 benzo(a)pyrene	BAPYR	600				
78 3,4-benzofluoranthene*	B4BFAN	200				
88 benzo(ghi)perylene	BGHIPY	300				
98 benzo(k)fluoranthene*	BKFANT	200				
108 bis(2-chloroethyl)ether	B2CEXM	200				
118 bis(2-chloroethyl)ether	B2CLEE	150				
128 bis(2-chloroisopropyl)ether	B2CIFE	150				
138 bis(2-ethylhexyl)phthalate	B2EHP	150	3	3	3	
148 4-bromophenyl phenyl ether	4BRPPE	350				
158 butyl benzyl phthalate	BBZP	150				
168 2-chloronaphthalene	2CNAP	200				
178 4-chlorophenyl phenyl ether	4CLPPE	150				
188 chrysene* (see 58)	CHRY	100				
198 dibenzo(a,h)anthracene	DBAHA	150				
208 1,2-dichlorobenzene	12DCLB	200				
218 1,3-dichlorobenzene	13DCLB	200				
228 1,4-dichlorobenzene	14DCLB	200				
238 3,3'-dichlorobenzidine	33CL2B	700				
248 diethyl phthalate	DEP	150				
258 dimethyl phthalate	DMP	200				
268 di-n-butyl phthalate	DNPB	100				
278 2,4-dinitrotoluene	24DNT	350				
288 2,6-dinitrotoluene	26DNT	800				
298 di-n-octyl phthalate	DNOP	100				
308 1,2-diphenylhydrazine	12DPH	150				
(as azobenzene)						
318 fluoranthene	FANT	100				
328 fluorene	F1RFNF	150				
338 hexachlorobenzene	CL6B2	350				
348 hexachlorobutadiene	HCBD	800				
358 hexachlorocyclopentadiene	CL6CP	800				
368 hexachloroethane	CL6ET	500				
378 indeno(1,2,3-cd)pyrene	ICDPYR	300				
388 isophorone	ISOPHR	100				
398 naphthalene	NAP	100				
408 nitrobenzene	NR	200				
418 N-nitrosodimethylamine	NDMA	150				
428 N-nitrosodi-n-propylamine	NPNPA	200				
438 N-nitrosodiphenylamine	NNDPA	350				
448 phenanthrene* (see 38)	PHANTR	100				
458 pyrene	PYR	100				
468 1,2,4-trichlorobenzene	123TCB	300				

BNA SURROGATES

Spike level	Units					
d ₅ -nitrobenzene	MDNS					
2 fluorobiphenyl	F1OBP					
d ₆ -naphthalene	NAPD6					

NOTE: All results reported in ug/l unless otherwise noted.
Where no value appears, the compound was not detected.

NA=North Area

SA=South Area

ANALYTICAL RESULTS

Instrument: #22

Project No./Client 3060-364 EA Engineers/Tooele Date February 18, 1986 Page 2 of 2

site	////	WA	SA	OCMB		
lab no.	////	Well 3	Well 2			
frn no.	////					
analysis date	////	1/30/86	1/30/86	1/30/86		
analysis time	////					
analyst initials	////	LMC	LMC	LMC		

ACID COMPOUNDS

2A	2-chlorophenol	2CLP	200				
2A	2,4-dichlorophenol	24DCLP	300				
3A	2,4-dimethylphenol	24DMPN	400				
5A	4,6-dinitro-o-cresol	46DN2C	700				
5A	2,4-dinitrophenol	24DNP	700				
6A	2-nitrophenol	2NP	400				
7A	4-nitrophenol	4NP	350				
8A	p-chloro-m-cresol	4CL3C	400				
9A	pentachlorophenol	PCP	350				
10A	phenol	PHENOL	150				
11A	2,4,6-trichlorophenol	246TCP	800				

ACID SURROGATES

Spike level _____ Units

2-F-phenol	2FP					
phenol-d6	PHENODE					
benta-F-phenol	PPP					

PESTICIDES

1P	aldrin	ALDRN	1000			
2P	α -BHC	ABHC	1000			
3P	δ -BHC	BBHC	1000			
4F	γ -BHC (lindane)	LIN	1000			
5F	δ -BHC	DBHC	1000			
6P	chlor dane	CLDAN	25.000			
7P	4,4'-DDT	PPDDT	1000			
8P	4,4'-DDE	PPDDF	1000			
9F	4,4'-DDD	PPDDD	1000			
10P	dieldrin	DLDRN	1000			
11P	α -endosulfan	AENSIF	5000			
12P	β -endosulfan	BENSIF	5000			
13P	endosulfan sulfate	ESFSO4	5000			
14P	endrin	ENDRN	2000			
15P	endrin aldehyde	ENDALD	5000			
16P	heptachlor	HPCL	1000			
17P	heptachlor epoxide	HPCLE	1000			
18P	PCB-1242	PCB242	10.000			
19P	PCB-1254	PCB254	10.000			
20P	PCB-1221	PCB221	10.000			
21P	PCB-1232	PCB232	10.000			
22P	PCB-1248	PCB248	10.000			
23P	PCB-1260	PCB260	10.000			
24P	PCB-1016	PCB016	10.000			
25P	toxaphene	TXPHEN	50.000			

NOTE: All results reported in _____ unless otherwise noted.
Where no value appears, the compound was not detected.

TABLE 1. DATA SUMMARY^a, TOOKE ARMY DEPOT

<u>Analyte</u>	<u>North Area Well 3</u>	<u>South Area Well 2</u>	<u>QCMB</u>	<u>Target/Found</u>	
				<u>QCSP</u>	<u>QCSP</u>
Nitroaromatics:					
NB	<2.2	<2.2	<2.2	5.20/4.46	10.4/8.74
13DNB	<2.3	<2.3	<2.3		
135TNT	<1.4	<1.4	<1.4		
24DNT	<0.56	<0.56	<0.56		
26DNT	<1.2	<1.2	<1.2		
246TNT	<1.9	<1.9	<1.9		
RUX	<7.0	<7.0	<7.0		
HMX	<23	<23	<23		
Tetryl	<5.6	<5.6	<5.6		
BNAs:					
2FP	40.0/14.0	50.0/19.5	40.0/14.8		
PHEND6	30.0/6.2	50.2/13.2	30.0/9.7		
PFPP	39.7/11.6	49.7/10.5	39.7/8.5		
2FBP	39.7/8.2	49.7/24.3	39.7/18.9		
DEPD4	29.5/13.1	49.2/33.7	29.5/16.8		
MNOPD4	30.0/6.9	50.0/16.9	30.0/11.5		
VOCAs:					
CDCL3	15.0/11.6	30.0/27.3	15.0/12.9		
12DCDD4	5.0/3.1	10.0/7.9	5.0/3.4		
ETBD10	15.0/13.9	30.0/28.1	15.0/13.3		
Metals:					
As	<9	<9	10/7.6	25/28.8	40/49.6
Ba	<1000	<1000	1500/1410	3000/2700	5000/4320
Cd	<3.6	<3.6	10.0/10.1	25.0/23.7	50.0/47.4
Cr	<8.4	<8.4	10/10.3	20/22.7	50/51.4
Cu	<1	23.8	2/1.4	5/5.4	10/12.5
Pb	<9.6	<9.6	15/14.0	25/23.0	50/43.6
Ni	<25	<25	50/39	100/88	250/247
Se	<3	<3	5/5.6	10/9.3	25/19.4
Ag	<0.5	<0.5	1.0/1.14	2.0/2.29	5.0/4.62
Zn	<100	<100	200/210	400/409	1000/1040
Na	<0.85	<0.85	1.5/1.42	2.5/2.41	5.0/4.80
CYN	<11	<11	20.0/18.0	40.0/40.1	100/100

TABLE 1. DATA SUMMARY^a, TOOELE ARMY DEPOT
(Continued)

Analyte	North Area		South Area		Target/Found	
	Well 3	Well 2	QCMB	QCSP	QCSP	QCSP
Surfactants	<25	<1.5	<25	200/195	500/400	1,000/960
Phenols (PHENLC)	5	5	<5	10/9	30/30	50/50
NIT (NO3/NO2)	2,750	1,850	<500	1,000/1,000	3,000/3,000	5,000/4,800
cL	158	52,600	<900	2,000/1,700	5,000/5,200	10,000/9,800
F	310	200	<100	200/200	400/420	1,000/1,050
BR	410	490	<100	200/240	500/400	1,000/1,010
Pesticides:						
aldrin	<0.15	<0.15	<0.15	0.4/0.125	0.8/0.481	2.0/1.49
alpha-BHC	<0.1	<0.1	<0.1			
beta-BHC	<0.1	<0.1	<0.1			
delta-BHC	<0.1	<0.1	<0.1			
lindane	<0.03	<0.03	<0.03	0.04/0.042	0.08/0.106	0.2/0.258
chlor dane	<0.1	<0.1	<0.1			
4,4'-DD	<0.1	<0.1	<0.1			
4,4'-DDE	<0.1	<0.1	<0.1			
4,4'-DDT	<0.3	<0.3	<0.3	0.5/0.460	1.0/1.10	2.5/2.89
dieldrin	<0.086	<0.086	<0.086	0.2/0.183	0.4/0.385	1.0/1.01
endosulfan I	<0.1	<0.1	<0.1			
endosulfan II	<0.1	<0.1	<0.1			
endosulfan sulfate	<0.1	<0.1	<0.1			
endrin	<0.22	<0.22	<0.22	0.4/0.408	0.8/0.919	2.0/2.53
endrin aldehyde	<0.1	<0.1	<0.1			
heptachlor	<0.7	<0.7	<0.7	2.0/1.14	4.0/3.38	10/8.36
heptachlor epoxide	<0.1	<0.1	<0.1			
toxaphene	<0.5	<0.5	<0.5			
PCB-1016	<0.5	<0.5	<0.5			
PCB-1221	<0.5	<0.5	<0.5			
PCB-1232	<0.5	<0.5	<0.5			
PCB-1242	<0.5	<0.5	<0.5			
PCB-1248	<0.5	<0.5	<0.5			
PCB-1254	<0.5	<0.5	<0.5			
PCB-1260	<0.5	<0.5	<0.5			

NOTES: ^aAll data are reported in ug/l and are not corrected for accuracy.

TABLE 2. DATA FOR CODING

<u>Analyte</u>	<u>Method No.</u>	<u>Accuracy</u>	<u>Precision^a</u>	<u>Inst. No.</u>	<u>Initials</u>	<u>Analysis Date (1986)</u>
Nitroaromatics:						
NB	D1	0.746	0.375	10	MHO	1/20
13DNB	D1	0.960	1.02	10	MHO	1/20
135TNB	D1	0.867	0.378	10	MHO	1/20
24DNT	D1	0.955	0.797	10	MHO	1/20
26DNT	D1	0.835	0.323	10	MHO	1/20
246TNT	D1	0.695	0.482	10	MHO	1/20
RDX	D1	0.851	4.70	10	MHO	1/20
HMX	D1	0.414	5.03	10	MHO	1/20
Tetryl	D1	0.778	3.97	10	MHO	1/20
BNAs:						
2FP	K1	0.370	999.	22	LMC	1/30
PHEND6	K1	0.263	999.	22	LMC	1/30
PFP	K1	0.237	999.	22	LMC	1/30
2FBP	K1	0.379	999.	22	LMC	1/30
DEPD4	K1	0.749	999.	22	LMC	1/30
DNOPD4	K1	0.391	999.	22	LMC	1/30
VOAs:						
CDCL3	2J	0.937	999.	21	BAK	1/25
12DCD4	2J	0.820	999.	21	BAK	1/25
ETBD10	2J	0.960	999.	21	BAK	1/25
Metals:						
Sb	1B ^b	1.00	3.72	11	AMS	2/21
As	1B	1.04	999.	11	AMS	2/26
Ba	1M	0.901	999.	12	RDS	2/17
Be	b	0.987	3.09	20	JMN	2/17
Cd	1M	0.934	1.13	12	RDS	2/13
Cr	1B	1.01	2.69	11	AMS	2/14
Cu	1B	1.01	999.	11	AMS	2/22
Pb	1B	0.832	4.43	11	AMS	2/21
Ni	b	0.880	8.28	20	JMN	2/17
Se	1B	1.05	999.	11	AMS	2/23
Ag	1B	1.07	999.	11	AMS	2/12
Tl	1B	0.881	2.34	11	AMS	2/22
Zn	1M	1.04	26.6	12	RDS	2/13
Hg	1D	0.964	0.244	13	PAW	1/23
CYN	4K	1.02	5.38	15	BJW	1/27
Surfactants						
Phenols (PHENLC)	99	000	999.	15	CAJ	1/18
	b	1.02	0.961	16	EGD	1/29
NIT (NO ₃ /NO ₂)	1U	0.950	47.3	16	EGD	1/27
CL	6X	1.00	999.	00	RDS	2/10
F	b	1.06	120	15	PAW	2/12
BR	c	0.989	999.	15	CAJ	2/11

TABLE 2. DATA FOR CODING
(CONTINUED)

<u>Analyte</u>	<u>Method No.</u>	<u>Accuracy</u>	<u>Precision^a</u>	<u>Inst. No.</u>	<u>Initials</u>	<u>Analysis Date (1986)</u>
Pesticides:						
ALDRN	2F	0.673	0.0494	07	SAW	1/30
LIN	2F	1.22	999.	07	SAW	1/30
CLDAN	2F	0.947	999.	07	SAW	1/30
PPDDT	2F	1.21	999.	07	SAW	1/30
DLDRN	2F	1.04	0.0290	07	SAW	1/30
EN-RN	2F	1.33	0.0825	07	SAW	1/30
HPCL	2F	0.886	999.	07	SAW	1/30

NOTES: ^aThe precision value (other than 999.) must be tied to the exponent for the result. If the exponent is other than zero, the decimal point for the precision value must be moved so when the reported precision is combined with the exponent, it gives the value listed in the table.

^bThese parameters have not been certified by USATHAMA as of this report date, but the certification analyses and method documentation have been submitted for approval.

^cBromide is not certified.

GC/MS PRIORITY POLLUTANTS-DETECTION LIMITS

VDA's (WATER)

parameter	code	detection limit (ug/l)
BENZENE	C6H6	3
BROMOFORM	CHBR3	3
CARBON TETRACHLORIDE	CCL4	0.8
CHLOROBENZENE	CLC6H5	3
CHLORODIBROMOMETHANE	DBRCLM	0.8
CHLOROETHANE	C2H5CL	3
2-CHLOROETHYL VINYL ETHER	2CLEVE	3
CHLOROFORM	CHCL3	3
DICHLOROBROMOMETHANE	BRDCLM	0.8
1,1-DICHLOROETHANE	11DCLE	3
1,2-DICHLOROETHANE	12DCLE	0.8
1,1-DICHLOROETHYLENE	11DCE	3
1,2-DICLOROPROPANE	12DCLP	0.8
1,3-DICHLOROPROPYLENE	13DCPE	0.8
ETHYL BENZENE	ETC6H5	3
METHYL BROMIDE	CH3BR	3
METHYL CHLORIDE	CH3CL	3
METHYLENE CHLORIDE	CH2CL2	3
1,1,2,2-TETRACHLOROETHANE	TCLEA	3
TETRACHLOROETHYLENE	TCLEE	3
1,2-TRANSDICHLOROETHYLENE	T12DCE	3
1,1,1-TRICHLOROETHANE	111TCE	0.8
1,1,2-TRICHLOROETHANE	112TCE	0.8
TRICHLOROETHYLENE	TRCLE	3
TRICHLOROFUOROMETHANE	CCL3F	3
VINYL CHLORIDE	C2H3CL	3

GC/MS PRIORITY POLLUTANTS-DETECTION LIMITS
ACID'S (WATER)

parameter	code	detection limit (ug/l)
2-CHLOROPHENOL	2CLP	4
2,4-DICHLOROPHENOL	24DCLP	4
2,4-DIMETHYLPHENOL	24DMPN	3
4,6-DINITRO-O-CRESOL	46DN2C	9
2,4-DINITROPHENOL	24DNP	9
2-NITROPHENOL	2NP	3
4-NITROPHENOL	4NP	9
P-CHLORO-M-CRESOL	4CL3C	9
PENTACHLOROPHENOL	PCP	9
PHENOL	PHENOL	3
2,4,6-TRICHLOROPHENOL	246TCP	9

PESTICIDE'S (WATER)

parameter	code	detection limit (ug/l)
ALDRIN	ALDRN	4
ALPHA-BHC	ABHC	4
BETA-BHC	BBHC	4
GAMMA-BHC (LINDANE)	LIN	4
DELTA-BHC	DBHC	4
CHLORDANE	CLDAN	3
4,4'-DDT	PPDDT	3
4,4'-DDE	PPDDE	3
4,4'-DDD	PPDDD	3
DIELDRIN	DLDRN	3
ALPHA-ENDOSULFAN	AENSLF	3
BETA-ENDOSULFAN	BENSLF	3
ENDOSULFAN SULFATE	ESFSO4	3
ENDRIN	ENDRN	4
HEPTACHLOR	HPCL	4
HEPTACHLOR EPOXIDE	HPCLE	4

GC/MS PRIORITY POLLUTANTS-DETECTION LIMITS
BNA's (WATER)

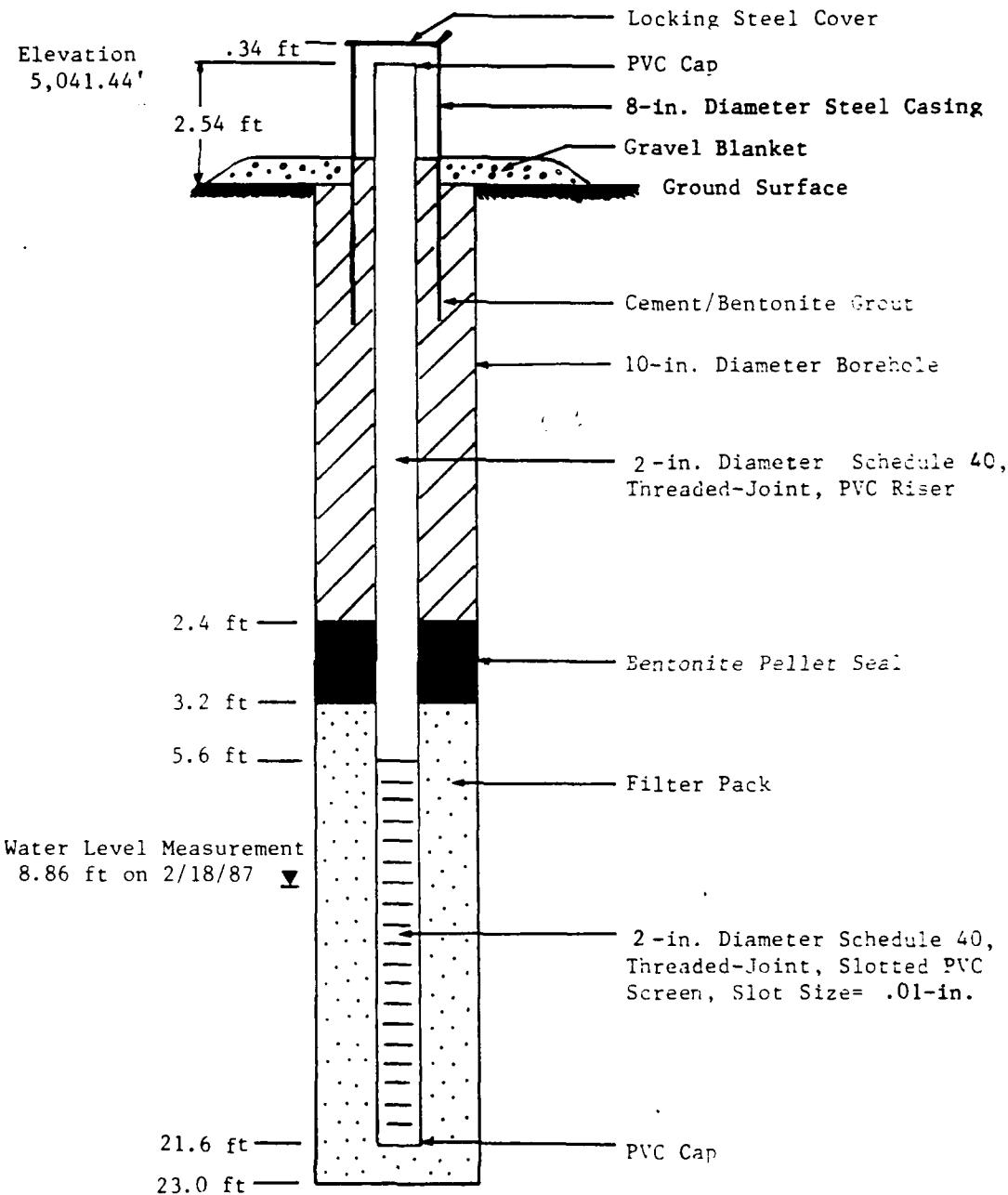
parameter	code	detection limit (ug/l)
ACENAPHTHENE	ANAPNE	10
ACENAPHTHYLENE	ANAPYL	10
ANTHRACENE	ANTRC	4
BENZIDINE	BENZID	3
BENZO(A)ANTHRACENE	BAANTR	3
BENZO(A)PYRENE	BAPYR	3
3,4-BENZOFUORANTHENE	BBFANT	3
BENZO(GH)PERYLENE	BGHIPY	3
BENZO(K)FLUORANTHENE	BKFANT	3
BIS-2-CHLOROISOPROPYLETHER	B2CIPE	10
BIS-3-ETHYLHEXYLPHTHALATE	B2EHP	3
4-BROMOPHENYLPHENYLETHER	4BRPPE	10
BUTYLBENZYLPHTHALATE	BBZP	3
2-CHLORONAPHTHALENE	2CNAP	10
4-CHLOROPHENYLPHENYLETHER	4CLPPE	10
CHRYSENE	CHRY	3
DIBENZO(A,H)ANTHRACENE	DBAHA	3
1,2-DICHLOROBENZENE	12DCLB	10
1,3-DICHLOROBENZENE	13DCLB	10
1,4-DICHLOROBENZENE	14DCLB	10
3,3'-DICHLOROBENZIDINE	33DCBD	3
DIETHYLPHTHALATE	DEP	4
DIMETHYLPHTHALATE	DMP	4
DI-N-BUTYLPHTHALATE	DNBP	4
2,4-DINITROTOLUENE	24DNT	10
2,6-DINITROTOLUENE	26DNT	10
DI-N-OCTYLPHTHALATE	DNOP	3
1,2-DIPHENYLHYDRAZINE	12DPH	10
FLUORANTHENE	FANT	3
FLUORENE	FLRENE	10
HEXACHLOROBENZENE	CL6BZ	10
HEXACHLOROBUTADIENE	HCBD	10
HEXACHLOROCYCLOPENTADIENE	CL6CP	10
HEXACHLOROETHANE	CL6ET	10
INDENO(1,2,3-CD)PYRENE	ICDPYR	3
ISOPHORONE	ISOPHR	10
NAPHTHALENE	NAP	10
NITROBENZENE	NB	10
N-NITROSODIMETHYLAMINE	NNDMA	10
N-NITROSODI-N-PROPYLAMINE	NDNPA	3
N-NITROSODIPHENYLAMINE	NNDPA	10
PHENANTHRENE	PHANTR	3
PYRENE	PYR	3
1,2,4-TRICHLOROBENZENE	124TCB	10

APPENDIX II-B

S-TEAD WELL COMPLETION DIAGRAMS, BORING LOGS, AND DEVELOPMENT LOGS

COMPLETION DIAGRAM

WELL CAM-1



TOOELE ARMY DEPOT, UTAH

LEGEND

CAM-1

Particle Size Identification

Boulders	12-in. diameter or more
Cobbles	3-12-in. diameter
Gravel	Coarse 3/8-3 in. Fine 1/4-3/8 in.
Sand	Coarse 2.0-4.75 mm (dia. of pencil lead) Medium 0.425-2.0 mm (dia. of broom straw) Fine 0.074-0.425 mm (dia. of human hair)
Silt	0.005-0.074 mm (cannot see particles)

Moisture Content

<u>Descriptive Term</u>	<u>Criteria</u>
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

Relative Proportions

<u>Descriptive Term</u>	<u>Percent</u>
Trace	1-10
Little	11-20
Some	21-35
And	36-50

MORCOHESIVE SOILS

(Silt, Sand, Gravel, and Combinations)

Density

<u>Descriptive Term</u>	<u>(a)</u>
Very Loose	5 blows/ft or less
Loose	6-10 blows/ft
Medium Dense	11-30 blows/ft
Dense	31-50 blows/ft
Very Dense	51 blows/ft or more

COHESIVE SOILS

(Clay, Silt, and Combinations)

Consistency

<u>Descriptive Term</u>	<u>(a)</u>
Very Soft	3 blows/ft or less
Soft	4-5 blows/ft
Medium Stiff	6-10 blows/ft
Stiff	11-15 blows/ft
Very Stiff	16-30 blows/ft
Hard	31 blows/ft or more

DRAULING CONTRACT
Sergeant, Haushius & Becker, Inc.
J. M. Carter



EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY, INC.

LOG OF SOIL BORING

Co-ordinates: _____
 Surface Elevation: _____
 Casing Above Surface: _____
 Reference Elevation: _____
 Reference Description: _____

JOE NO.	CLIENT	LOCATION
THA 51 E 45THAMA		PERO-3
		CAMOS
DRILLING METHOD: 6-in I.D. to 10-in O.D.		BORING NO.
Hollow Stem Auger. CME-75		CAMO-1
Truck mounted N.I.T Rig		SHEET
SAMPLING METHOD: 2-in Standard Split		1 or 2
Spoon driven by " ~ 140 lbs		DRILLING
WATER LEVEL	7.66' 7.86' 7.86'	START FINISH
TIME	1640 0920 0830	TIME TIME
DATE	7-10-86 7-10-86 7-10-86	DATE DATE
REFERENCE	Below G.S. BLS BLS.	7-10-86

SAMPLER TYPE	WHEELS INCHES	DEPTH OF CASING	SAMPLE DEPTH	BLOWS/6 IN. SAMPLER
GAS			1	
			6.2	
			2	
S.S. 24"	24"	2	4	
	18"	4.6	5	
			6	
			12	
S.S. 24"	24"	3	14	
	22"	9-11	30	
			24	
			2	
S.S. 24"	24"	4	3	
	18"	14.6	5	
			4	
			15	
S.S. 24"	24"	5	16	
	20"	14.31	13	
			18	

DEPTH IN FEET	GRAPHIC LOG	SURFACE CONDITIONS:	REMARKS:
0		Pale yellowish brown (10y 6/2)	
1	Fill	Fill - medium to coarse gravel and medium to coarse sand w/ some silt. dry loose	Note: 3' driller notice change in driller to softer material.
2			1. Auger advance to 4'. Ball = 0
3	-		2. S.S. driven from 3' 4-6' w/ 16" Recovery (R)
4		pale brown (5yr 5/4)	3. Holes kick off 20 ppm iron base from sample.
5	ML	CLAYEY 3.14: silt and clay w/ trace coarse sand. soft moist 1.9ft 1.5" wet. 3.11ft 0.14 odor	
6	CL		
7	-		
8			
9		Sandy s. It: pale olive green (10y 6/2) 3.17w/ 1.14ft to some fine sand. trace clay no apparent bedding wet. medium dense.	Note: Auger advance to 9'. S.S. driven from 9ft 11". w/ 2" R. 2. Holes kick off 1 ppm from sample.
10	ML		
11			
12			
13			
14			
15	SM	Silty sand: pale olive (10y 6/2) fine sand w/ little medium sand, little to some silt. wet occasional layers medium before 14-15' to COARSE & And. 100% saturated material coming up angles	Note: Auger advance to 14'. S.S. driven from 14-16" w/ 8" R.
16			
17			
18			
19	ML	Clayey silt: pale olive green w/ some clay (10y 6/2) from 19-21' silt w/ some clay, little fine sand stiff trace gravel moist to wet.	Note: Auger advance to 19'. S.S. driven from 19-21' w/ 12" R. in spoon.
20	CL		



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LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

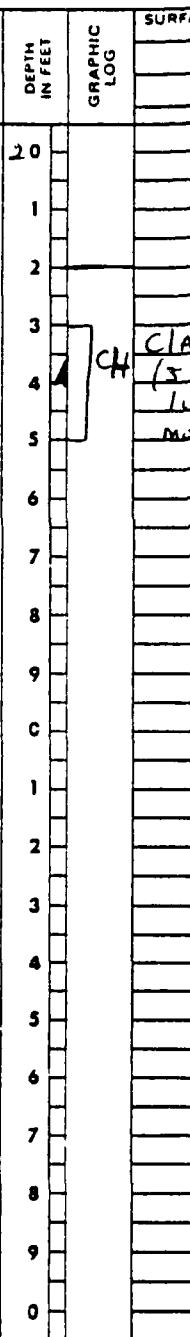
Reference Elevation: _____

Reference Description: _____

JOB NO. THA 516	CLIENT USA TITAMA	LOCATION CAMOS TOMO-5	
DRILLING METHOD:		BORING NO. CAMO-1	
		SHEET	
SAMPLING METHOD:		2 or 2	
		DRILLING	
WATER LEVEL		START	FINISH
TIME		TIME	
DATE		DATE	
REFERENCE			

PRINTING CONSTRUCTION

Tom Fortier or John Fortier 5/5/1867



AC CONDITIONS:	Note: at 2' driller notice change to harder drilling and stopped and drove S.S. from 23-25'
Description: greenish gray gy 6/1) Clay w/ little silt stiff blasty wet.	Drilled to 24' ended bore hole at 1355' hole open to 23

Development
FIELD RECORD OF WELL GAUGING, ~~PURGING AND SAMPLING~~

Site: TCAD-South Area CAMDS

Well No: CAM-1 Gauge Date: 7-15-86 Time: 0915 hrs

Weather: Sunny ~ 85 - 90 °F

Well Condition: Well sound, 6" gravel bed 4' diameter around well protective casing, 3 protective post (steel) 4' from well.

Well Diameter (inches): 2" PVC Schedule 40 well in 10" dia. borehole

Odor (describe): HAN background .6 ppm Headspace (well) .8 Hand 6A/10 sample prior to development: No product observed and no odor.
Sounding Method: 150' weighted tape Measurement Reference: Top PVC Casing.

Stick up/down (ft): 2.54'

(1) Well Depth (ft): 24.38' Purge Date: 7-15-86 Time: 0920

(2) Depth to Liquid (ft): 10.40' ^{Development} Purge Method: LJ pump

(3) Depth to Water (ft): 10.40' Purge Rate (gpm): Ave. 2.93 gpm

(4) Liquid Depth [(1)-(2)]: 13.98 Purge Time (min): 40 min.

(5) Liquid Volume [(4)xF] (gal): _____ Purge Volume (gal): 117.2

Did Well Pump Dry? Describe: No, water level draw down to 12.43' (top of pvc). Suction line raised and lower through entire well column.

Samplers: _____

Sampling Date: _____ Time: _____

Sample Type: _____ Split? _____ With Whom: _____

Comments and Observations: Discharge very silty at beginning.

as discharge clear up the well was surge by quickly

raising and lowering suction line periodically.

At 1030 hrs. discharge visibly clear. Surged me last time. Discharge cleared at 1040 hrs. Ended development

1045 hrs.

Well Development

Well # : CAM-1

Date well installed : 7-10-86

Development time : Began 1005 hrs. pumping rate : @ 1005 2.5 gpm
finish 1045 hrs. 1015 3.5 gpm
1020 3.0 "

1027 3.25 "
1040 2.50 "

Static Water level : @ ⁷⁻¹⁵⁻⁸⁶
~~1000 hrs.~~ - 10.40' ⁷⁻¹⁶⁻⁸⁶
@ ~~1027 hrs.~~ - 12.40'
(during pumping) ~~0830 hrs.~~ - 10.40'

Well And Borehole Vol.:

2" PVC well : 13.98'(water column) x .1692 gal/ft. = 2.28 gal x 5 = 11.4 gal.
Annular vol. betw 2" Well : 13.98'(water column) x (3.8 gal/ft. x 30% porosity) = 16.36 gal. x 5 = 81.
in 10" borehole 5 x borehole vol. = 93.2 gal

pH and Conductivity Measurements:

1000 hrs.	pH 7.44	Spec. Cond. 720
1016 hrs	" 7.71	" " 2,000
1030 hrs	" 7.80	" " 1,800
1045 hrs.	" 7.81	" " 1,800

Well depth And screen length:

Installed
from Log. 21.6 BLS.

Development description :

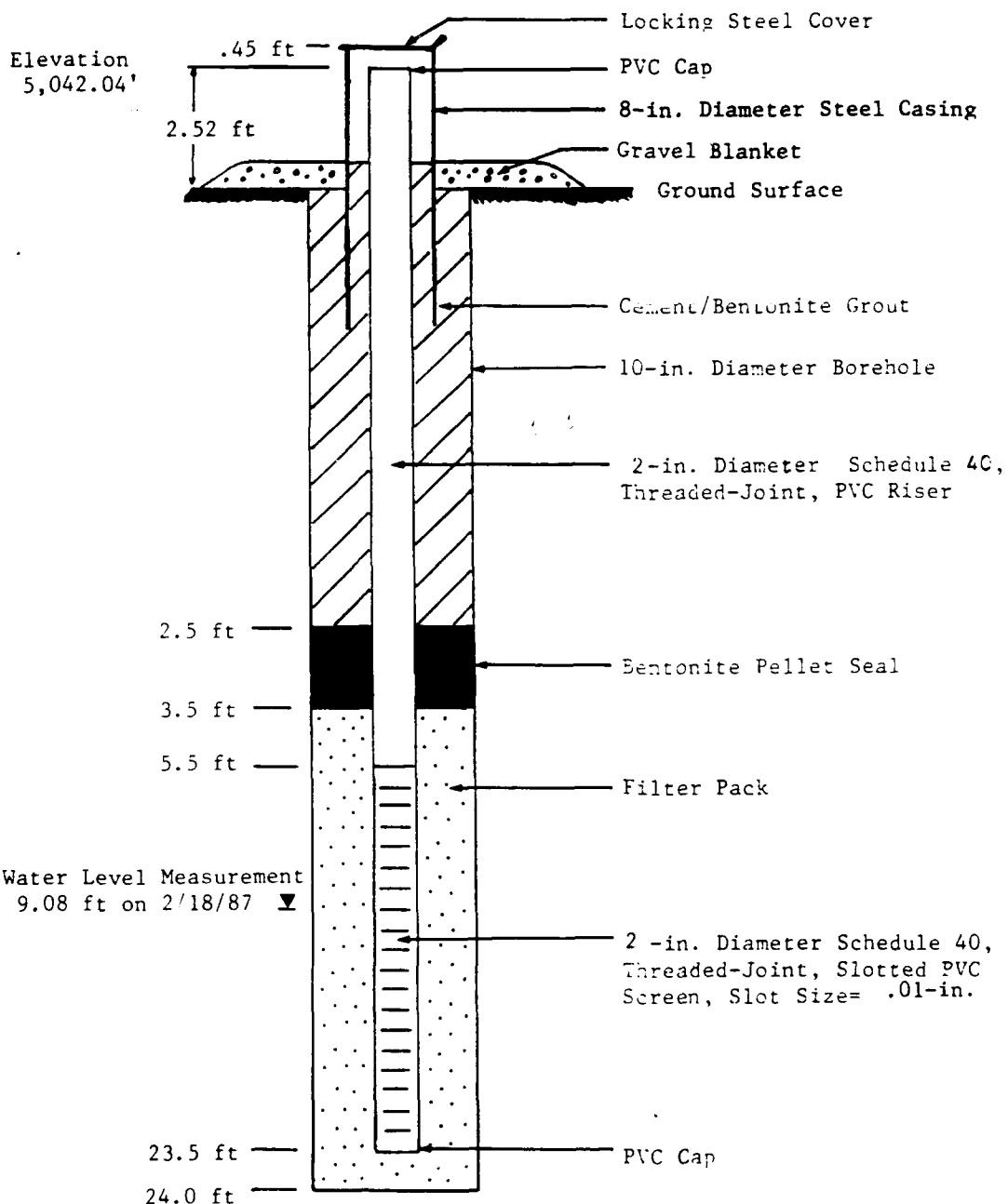
At start discharge very cloudy : surged well by agitating well water by quickly raising and lowering discharge line. After 30 mins. discharge cleared to slightly cloudy, at 1030 hrs. discharge visibly clear. Surged one last time and waited for discharge to clear. Visibly clear at 1040 hrs. Ended development @ 1045 hrs.

Quantity of Water removed :

Avg. pumping rate 2.93 gpm x 40 mins. = 117.28
removed.

COMPLETION DIAGRAM

WELL CAM-2



TOOELE ARMY DEPOT, UTAH

LEGEND

CAM-2

Sent by Tom P.

Particle Size Identification

Boulders	12-in. diameter or more
Cobbles	3-12-in. diameter
Gravel	Coarse 3/4-3 in. Fine 1/4-3/4 in.
Sand	Coarse 2.0-4.75 mm (dia. of pencil lead) Medium 0.425-2.0 mm (dia. of broom straw) Fine 0.074-0.425 mm (dia. of human hair)
Silt	0.005-0.074 mm (cannot see particles)

Moisture Content

Descriptive Term	Criteria
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

Relative Proportions

Descriptive Term	Percent
Trace	1-10
Little	11-20
Some	21-35
And	36-50

NONCOHESIVE SOILS

(Silt, Sand, Gravel, and Combinations)

Density

Descriptive Term	(a)
Very Loose	5 blows/ft or less
Loose	6-10 blows/ft
Medium Dense	11-30 blows/ft
Dense	31-50 blows/ft
Very Dense	51 blows/ft or more

COHESIVE SOILS

(Clay, Silt, and Combinations)

Consistency

Descriptive Term	(a)
Very Soft	3 blows/ft or less
Soft	4-5 blows/ft
Medium Stiff	6-10 blows/ft
Stiff	11-15 blows/ft
Very Stiff	16-30 blows/ft
Hard	31 blows/ft or more

Drilling down Sedgemoor, Ashdown? Borders &
D. I. Mar. Tin Can Bay

To Date
Date 5/27/87 Simulated



**EA ENGINEERING,
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LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

Reference Elevation: _____

Reference Description: _____

JOB NO.	CLIENT	LOCATION CANADA
THA 51C	USA THAMA	TCAD-3
DRILLING METHOD:	SAMPLING METHOD:	BORING NO.
6-in ID. 10-in OD. CMC 75	Standard Spt. + Spm Ø" driven Ø 4" c/w 140 162 Hammer 30" FRIOW	CANA-2
WATER LEVEL	TIME	START
8.08	8.23	8.21
TIME	1430	100042
DATE	7-14-86	11/5 1986
REFERENCE	865.	DATE 7-14-86
	AGS.	DATE 7-14-86
	865.	

SAMPLER TYPE	NUMBER OF DRIVEN STRIKES	DEPTH OF CASING	SHALLOW TEST RESULTS	BLOWINGS IN SAMPLER	DEPTH IN FEET	GRAPHIC LOG	SURFACE CONDITIONS:	
							Pale yellowish Brown (10 yr ½)	
GIA/B			1 6-5		0	Fill	F.I.: Gravelly silt. Silt w/ some coarse rounded gravel. Trace to little fine, dry loose.	Remarks: Advanced Auger to 4'. Material coming up dark brown and wet. S.S. driven from 4-6'
					1			
					2	--		
					3			
					4	CH	Silty clay: Pale yellowish brown (10 yr ½)	1. Sample has oily feel. And odor HAN 7 ppm above background.
					5	CL	clay w/ some sand & silt, no apparent bedding and little fine to medium sand soft. Top 10" moist (last 36" wet.)	Note: 4-9' material coming up Auger wet.
					6			
					7			1. Auger set at 9' S.S. driven from 9 to 11' wet.
					8		Sandy clay:	
					9		Top 4" pale Brown (5 yr ½) 2d " P.	
					10		Clay w/ some to little coarse HAN 6.5 ppm. to medium sand, little silt. up 3 ppm. wet soft	
					1		1st 10" pale yellowish brown silty clay:	
					2	CL	Clay w/ some to and silt, little to trace fine sand at 14'.	Note: Auger set
					3	ML	dense moist.	S.S. driven from 14-16' c/ 18"
					4		(10 yr ½)	R.
					13		Sandy clay: pale yellowish brown w/ little to some fine to medium sand, little silt. Thoroughly bedded occasional 1"-3" beds of medium sand wet	Material saturated coming up Auger
					6			
					7			
					8			
					ML		Pale yellowish Brown (10 yr ½)	
					9		Top 6" sandy silt: silt w/ some to little fine sand, trace to	
					10		1st 6" clay loose	
					11		Di. edge 6" silty sand: fine sand	
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20	SM		



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LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

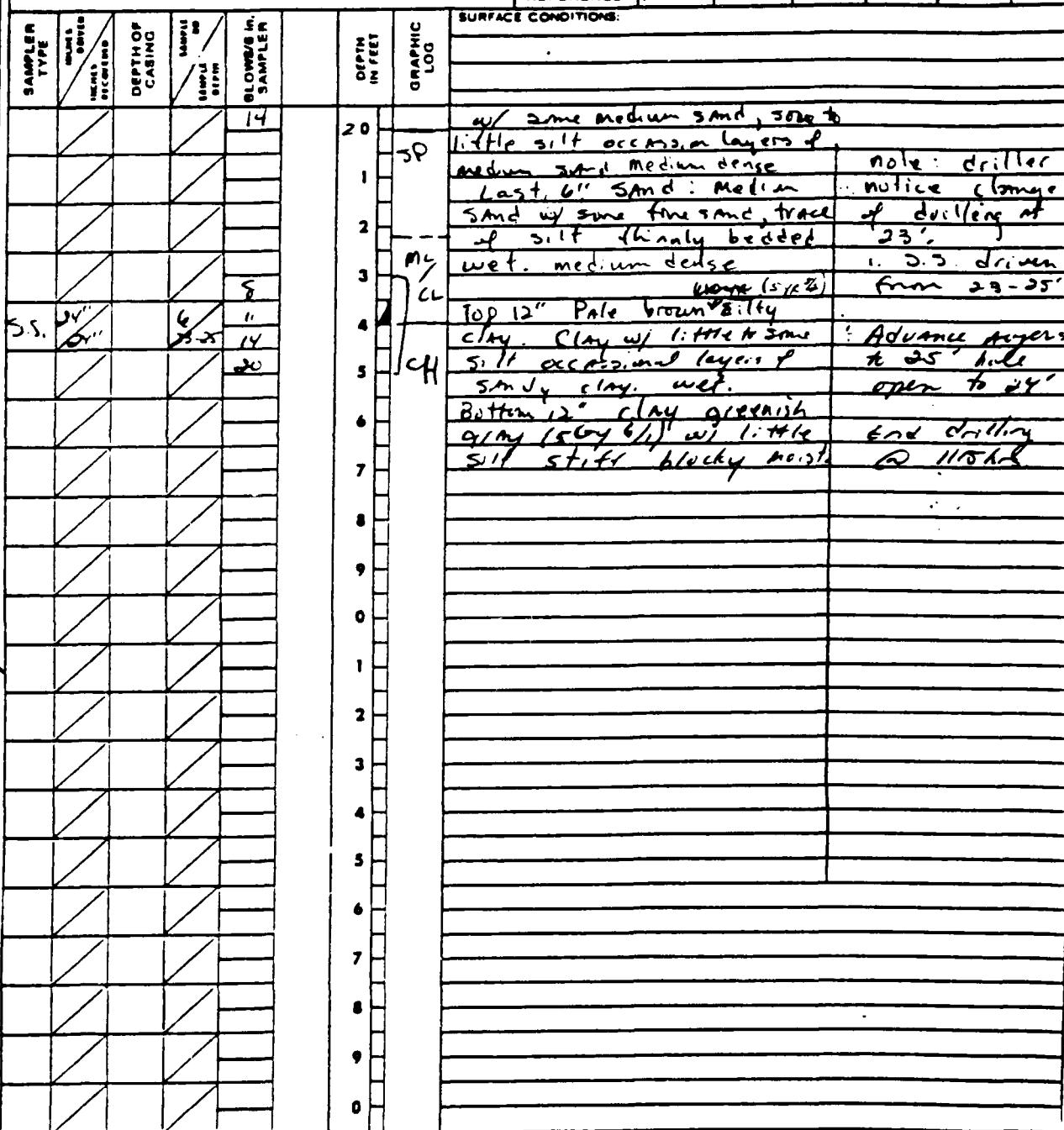
Reference Elevation: _____

Reference Description: _____

JOB NO	CLIENT	LOCATION
THASIE	USA THAI TRA	CAMO
		76AO-5
DRILLING METHOD:		BORING NO
		CAM-2
SAMPLING METHOD:		SHEET
		2 or 2
DRILLING		
WATER LEVEL		START TIME
TIME		FINISH TIME
DATE		DATE
REFERENCE		DATE

DRILLING CONTINUED
TIME CHART

By Tom Parker
DATE 5/22/82 CICK'D BY Joe



Development
FIELD RECORD OF WELL GAUGING, ~~PURGING AND SAMPLING~~

Site: TEAO - South Area CAMOS

Well No: CAM-2 Gauge Date: 7-15-86 Time: 1050 hrs.

Weather: Sunny 85-90°F

Well Condition: Well sound, 6" gravel bed 4' diameter around protective casing, 2 protective steel posts 4' from well.

Well Diameter (inches): 2" PVC Schedule 40 well, 10" dia. borehole

Odor (describe): No odor, HAN .8 ppm background 2.0 ppm in well headspace

Sounding Method: weighted tape Measurement Reference: Top PVC casing

Stick up/down (ft): 2.52'

(1) Well Depth (ft): 26.02' Purge Date: 7-15-86 Time: 1155 hrs.

(2) Depth to Liquid (ft): 10.75' *Development* Purge Method: Rig pump (centrifugal

(3) Depth to Water (ft): 10.75' Purge Rate (gpm): 3,15 Ave.

(4) Liquid Depth [(1)-(2)]: 15.27' Purge Time (min): 50

(5) Liquid Volume [(4)xF] (gal): _____ Purge Volume (gal): 157.50

Did Well Pump Dry? Describe: No, water drawdown to 11.87'

Suction line was raised and lowered through entire water column.

Samplers: _____

Sampling Date: _____ Time: _____

Sample Type: _____ Split? _____ With Whom: _____

Comments and Observations: Took a sample w/ a teflon lined barrier before development. No odor or floating product observed. Water was slightly cloudy.

*(Comments Cont'd)
next page*

Well Development

Well #: CAM-2

Date well installed: 7-14-86

Development time: 7-15-86

Began 1055 hrs.

finished 1145 hrs.

pumping rate: @ 1055	3.5
@ 1105	3.5
1120	3.5
1130	2.75
1135	3.0

Static Water level: 7-15-86

@ 1050 hrs. 10.75'

@ 1110 hrs. 11.87' (while pumping)

7-16-86
@ 0800 hrs. 10.73'

Well And Borehole Vol.

$$2'' \text{ PVC well: } 15.27' \text{ (water column)} \times .1632 \text{ gal/ft} = 2.49 \times 5 = 12.46 \text{ gal.}$$

$$\text{Or: Annular Vol. Borey: } 15.27' \times (3.9 \text{ gal/ft} \times 30\% \text{ porosity}) = 17.86 \times 5 = \underline{89.32}$$

pH and Conductivity Measurements:

$$1.5 \times \text{Borehole? Well Vol.} = 101.8 \text{ gal.}$$

Time	pH	Spec Cond.
1050 hrs.	7.54	180
1110 hrs.	7.53	160
1135 hrs.	7.63	140
1145 hrs.	7.57	140

Well depth and screen length:

26.02' - 2.50' stickup = 23.5'

18' of 0.01' slot 2" PVC Screen.

Development description:

At beginning of development discharge very silty and sandy. During development wells were surged by raising and lowering rapidly. @ 1130 hrs. discharge still only cloudy less silt and sand. @ 1155 visibly clear only slightly cloudy. Surged one time. Discharge became visibly clear @ 1145 hr. Stopped development.

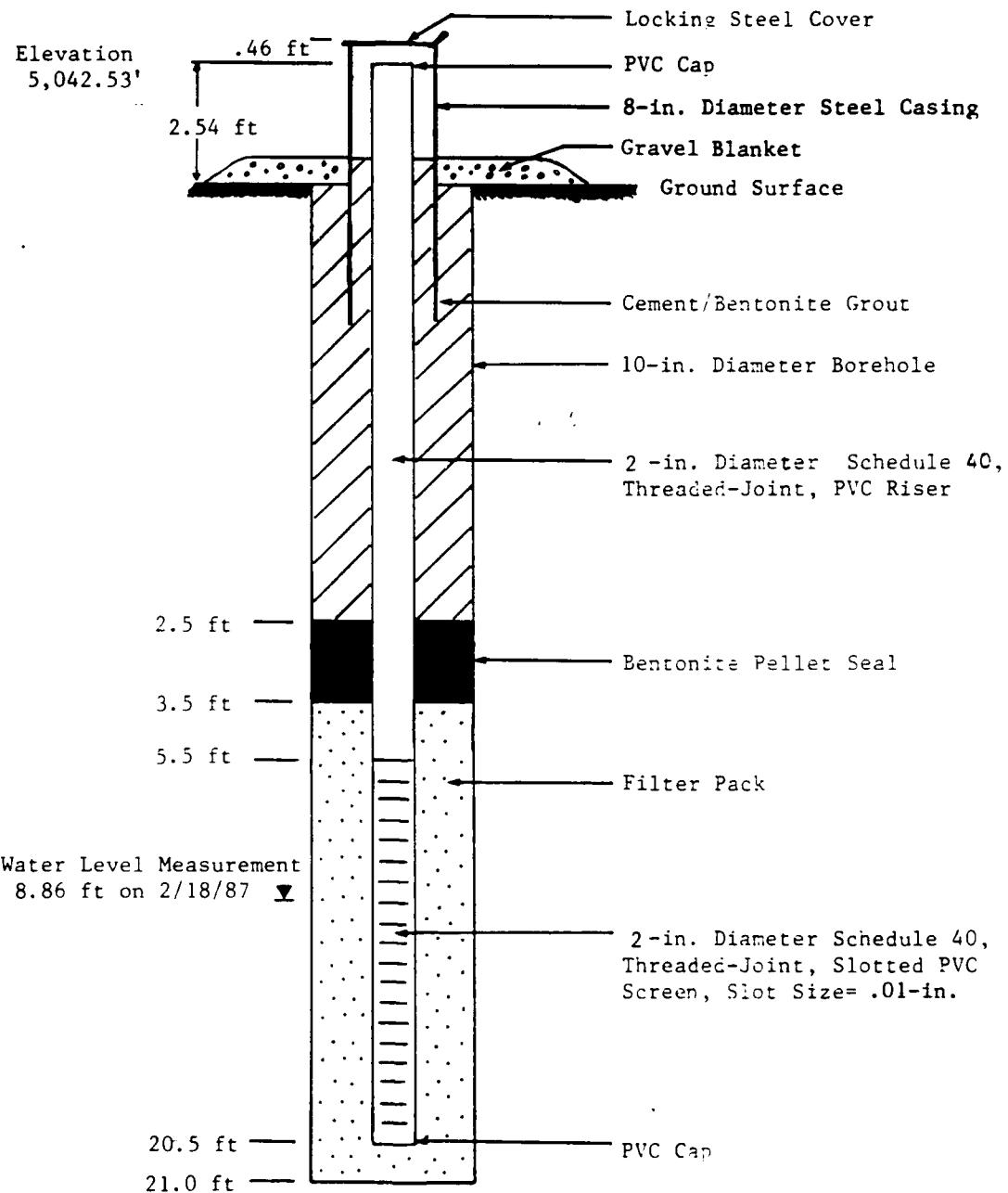
Quantity of Water removed:

Avg. pumping rate was 3.15 gpm for 50 min.

Tot. water volume removed = 857.5 gal.

COMPLETION DIAGRAM

WELL CAM-3



TOOELE ARMY DEPOT, UTAH

LEGEND

CAM-3

Sut by Tom P.

Particle Size Identification

Boulders	12-in. diameter or more
Cobbles	3-12-in. diameter
Gravel	Coarse 3/4-3 in. Fine 1/4-3/4 in.
Sand	Coarse 2.0-4.75 mm (dia. of pencil lead) Medium 0.425-2.0 mm (dia. of broom straw) Fine 0.074-0.425 mm (dia. of human hair)
Silt	0.005-0.074 mm (cannot see particles)

Moisture Content

<u>Descriptive Term</u>	<u>Criteria</u>
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

Relative Proportions

<u>Descriptive Term</u>	<u>Percent</u>
Trace	1-10
Little	11-20
Some	21-35
And	36-50

NONCOHESIVE SOILS

(Silt, Sand, Gravel, and Combinations)

<u>Descriptive Term</u>	<u>Density</u>
Very Loose	5 blows/ft or less
Loose	6-10 blows/ft
Medium Dense	11-30 blows/ft
Dense	31-50 blows/ft
Very Dense	51 blows/ft or more

COHESIVE SOILS

(Clay, Silt, and Combinations)

<u>Descriptive Term</u>	<u>Consistency</u>
Very Soft	3 blows/ft or less
Soft	4-5 blows/ft
Medium Stiff	6-10 blows/ft
Stiff	11-15 blows/ft
Very Stiff	16-30 blows/ft
Hard	31 blows/ft or more

DAILY W. CONN. SERGEANT, HUSTLER AND BOCKER
W. H. T. T. T. T. T. T.

Tom Porter



**EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY, INC.**

LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

Reference Elevation: _____

Reference Description: _____

JOB NO.	CLIENT	LOCATION (CROSS)			
THASIE	USA THAMA	TOAD-3			
DRILLING METHOD:	6-in. I.D. 10-in. 100 ft. Hollow Stem Auger. CME 75 Track Mounted Drill Rig.	BORING NO. CATH-3			
SAMPLING METHOD:	3" Standard Split Spoon driver 24" w/ 140 lbs 30" from	SHEET 1 or 2			
WATER LEVEL	6.42	8.40	8.36	START	ENDS
TIME	1730 hrs	1155	0855	TIME	TIME
DATE	7-14-86	7-14-86	7-14-86	DATE	DATE
REFERENCE	B6-S	06-S	B6-S.	7-14-86	7-14-86

SAMPLER TYPE	DEPTH OF CASING in feet	SAMPLE DEPTH in feet	BLOWINGS IN. SAMPLER	GRAPHIC LOG	SURFACE CONDITIONS:	
					DEPTH IN FEET	REMARKS:
					0	2" Asphalt, pale yellowish brown (10 yr ½)
					1	Fill, gravel, fine sand, loose
					2	--
					3	silty clay:
				CH	4	Dark yellowish brown (10 yr ½) Clay w/ some silt fiber to little fine to medium sand moist. soft. oily feel n.d. odor.
				CL	5	some silt fiber to little fine to medium sand moist. soft. oily feel n.d. odor.
					6	Set Auger to 4' S.S. driven from 4 to 6'
					7	1. H.W. Etc top above background sample.
					8	2. 4-6 material coming up auger as
					9	Note: Auger set at 9' S.S. driven from 9 to 11' w/ 16" R.
				ML	10	1. 17/16 12 ppm above background
				CL	11	2. oily odor.
					12	Note: Auger set at 14' S.S. driven from 14 to 16' w/ 16" R.
					13	1. 17/16 12 ppm above background
					14	2. oily odor.
					15	Note: Auger set at 14' S.S. driven from 14 to 16' w/ 16" R.
				SM	16	1. 17/16 12 ppm above background
					17	2. oily odor.
					18	Note: Auger set at 14' S.S. driven from 14 to 16' w/ 16" R.
					19	1. 17/16 12 ppm above background
					20	2. oily odor.
S.S. 1/4"	18"	2	3			
		4-6	3			
		7	3			
S.S. 1/4"	18"	11				
S.S. 1/4"	16"	3	18			
		9-11	25			
		44				
S.S. 1/4"	16"	15				
S.S. 1/4"	20"	4	17			
		11-16	15			
		18				
S.S. 1/4"	20"	19				
S.S. 1/4"	20"	5	11			
		17-21	11			



**EA ENGINEERING,
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TECHNOLOGY, INC.**

LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

Reference Elevation: _____

JOB NO. THASIE	CLIENT USA THAMA	LOCATION TEST- CAMOS
DRILLING METHOD:		BORING NO CAM-
SAMPLING METHOD:	-1.5 M	SHEET Z or C
WATER LEVEL		DRILLING
TIME		START TIME
DATE		DATE
REFERENCE		DA

卷之三

پریل اور تینیز گارڈ

Tom Parker
Steph 2 CINQ'D BY Steph

Development
FIELD RECORD OF WELL GAUGING, PURGING AND SAMPLING

site: TEAD - South Area CAMS

Well No: CAM-3 Gauge Date: 7-15-86 Time: 1150 hrs.

Weather: Sunny 85-90°F

Well Condition: Well sound, grout to surface (asphalt) 2 steel protective posts 3' from well.

Well Diameter (inches): 2" PVC schedule 40 well is 10" diameter borehole

Odor (describe): 140 ppm background, 4.0 ppm above background
in well head space

Sounding Method: weight tape Measurement Reference: Top PVC casing

Stick up/down (ft): 2.54'

(1) Well Depth (ft): 23.02' Purge Date: 7-15-86 Time: 1155 hrs.

(2) Depth to Liquid (ft): - Purge Method: Pipe pump (centrifugal)

(3) Depth to Water (ft): 10.94' Purge Rate (gpm): Varied

(4) Liquid Depth [(1)-(2)]: 12.08' Purge Time (min): 56 min.

(5) Liquid Volume [(4)xF] (gal): Purge Volume (gal): 101 gal.

Did Well Pump Dry? Describe: Well pumped down to 19.6' where
pump would not draw water, it was let sit and pump reop-

Samplers: _____

Sampling Date: _____ Time: _____

Sample Type: _____ Split? _____ With Whom: _____

Comments and Observations: Hand bailed a sample from well prior
to development, water had a floating oily sheen and
distinct oily odor. water slightly cloudy. During development
product was observed on surface of discharge.

Well Development

Well # : CAM-3

Date well installed : 7-14-86

Development time : Began 7-15-86
1155 hrs.

finished 1337

Static Water level : 7-15-86 7-16-86

@ 1150 hrs: 10.94' @ 0855 hrs: 10.90'
@ 1400 hrs: 11.00'

Well And Borehole Vol.

2" PVC well = 12.08' (water column) \times .1632 gal./ft = 1.97 \times 5 = 9.85 gal.

Analytic Vol. betw "well in 10" borehole": 12.08 (water column) \times (3.9 gal./ft. \times 30% porosity) = 14.13 \times 5 = 70.66

pH and Conductivity Measurements: 5 \times bore hole³ well vol. = 80.5 gal.

Time	pH	Spec. Cond.
1155 hrs	7.84	200
1224 "	7.76	240
1324 "	7.81	150
1340 "	7.79	180

Well depth and screen length:

23.02' - 2.54' stuckup = 20.48' BGS.

w/ 15' of 0.01" slot screen

Development description:

At start of development discharge very dirty sandy w/
an oily sheen on surface. Well was slow recharger and
would have to let sit for 5-10 min. before pumping again.
Well was surged by quickly raising and lowering siphon line
throughout water column. By 1930 hrs. well discharge
became visibly clear. Well pumped an additional
7 mins.

Quantity of Water removed:

6 min. @ 25 gpm = 20 gal.

7 min. @ 20 gpm = 14 "

9 min @ 20 gpm = 18 "

16 min. @ 1.5 gpm = 24 "

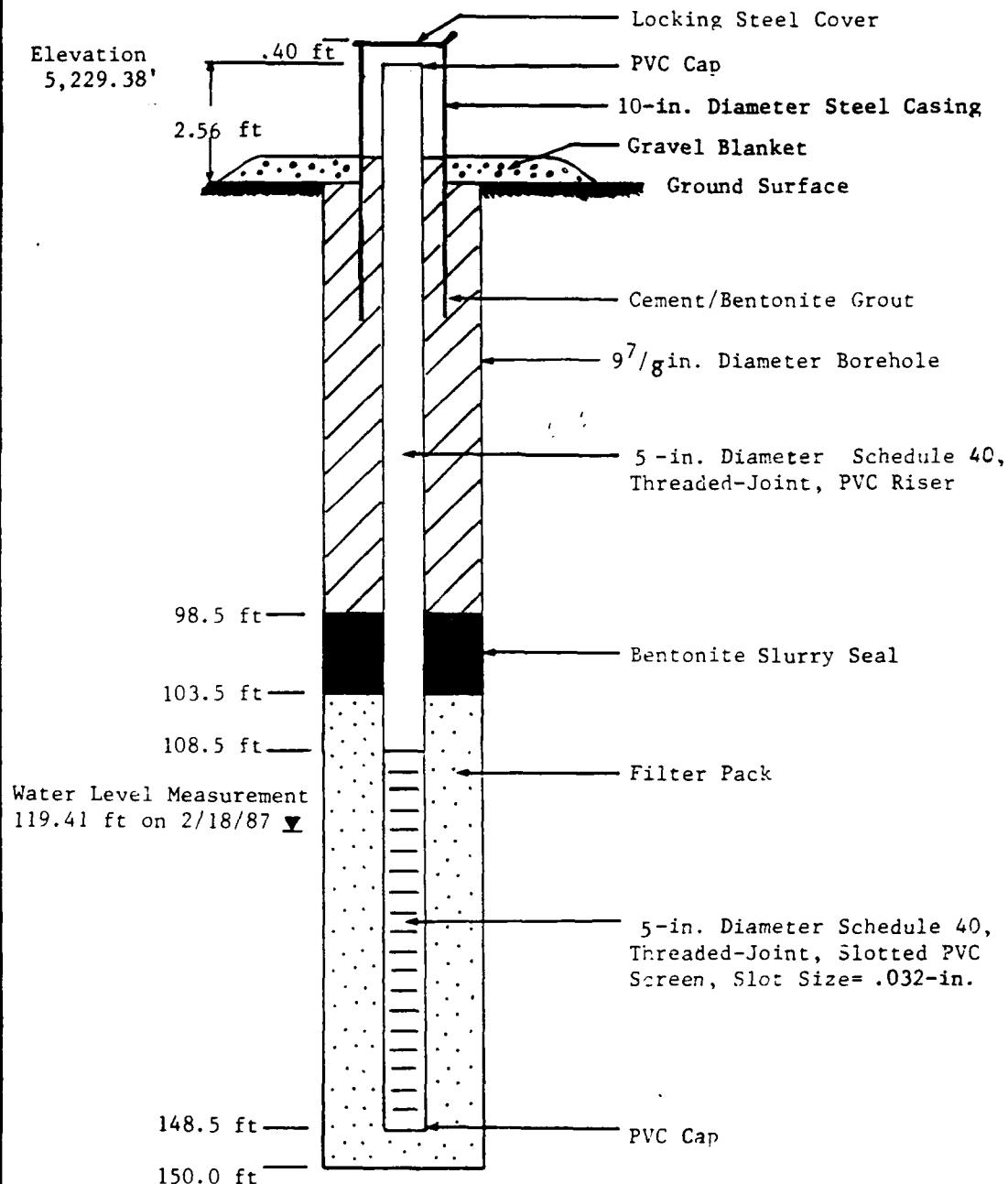
9 min @ 2.0 gpm = 18 "

7 min @ 1.0 gpm 7 "

101 gal. Tot.

COMPLETION DIAGRAM

WELL SBR-1



TOOELE ARMY DEPOT, UTAH

LEGEND

SBR-1

Particle Size Identification

Boulders	12-in. diameter or more
Cobbles	3-12-in. diameter
Gravel	Coarse 3/4-3 in. Fine 1/4-3/4 in.
Sand	Coarse 2.0-4.75 mm (dia. of pencil lead) Medium 0.425-2.0 mm (dia. of broom straw) Fine 0.074-0.425 mm (dia. of human hair)
Silt	0.005-0.074 mm (cannot see particles)

Moisture Content

Descriptive Term	Criteria
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

Relative Proportions

Descriptive Term	Percent
Trace	1-10
Little	11-20
Some	21-35
And	36-50

NONCOHESIVE SOILS

(Silt, Sand, Gravel, and Combinations)

Density

Descriptive Term	N ^(a)
Very Loose	5 blows/ft or less
Loose	6-10 blows/ft
Medium Dense	11-30 blows/ft
Dense	31-50 blows/ft
Very Dense	51 blows/ft or more

COHESIVE SOILS

(Clay, Silt, and Combinations)

Consistency

Descriptive Term	N ^(a)
Very Soft	3 blows/ft or less
Soft	4-5 blows/ft
Medium Stiff	6-10 blows/ft
Stiff	11-15 blows/ft
Very Stiff	16-30 blows/ft
Hard	31 blows/ft or more



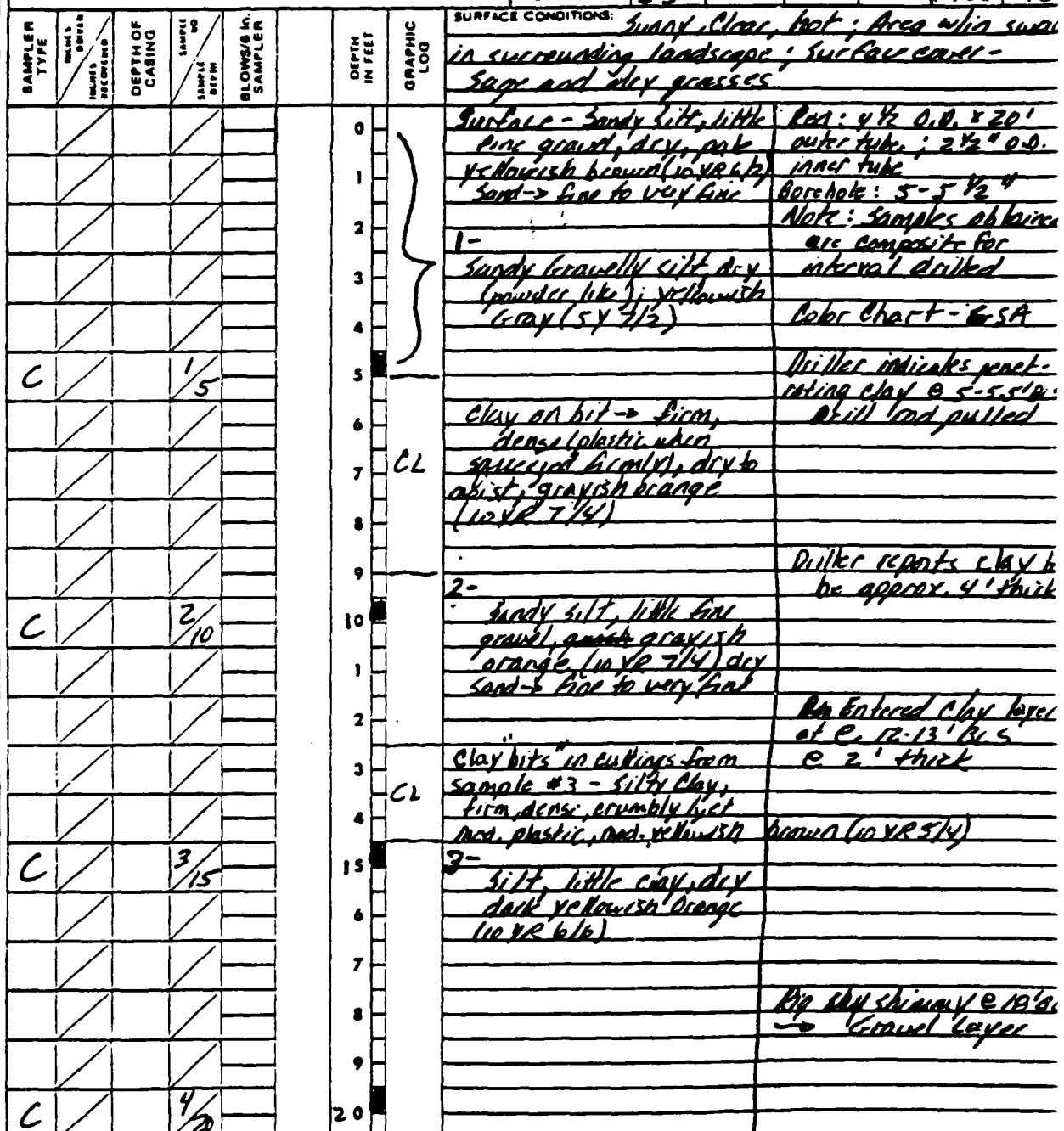
**EA ENGINEERING,
SCIENCE AND
TECHNOLOGY, INC.**

LOG OF SOIL BORING

Co-ordinates: _____
Surface Elevation: _____
Casing Above Surface: _____
Reference Elevation: _____
Reference Description: _____

JOB NO. JHA 51E	CLIENT USA THIAMA	LOCATION Rocky Bay Area Rock, US
DRILLING METHOD: <i>Drilltech D-40 K Top Drill Air Rotary w/ Suction Air Compressor (swan type 750psi)</i>	BORING NO. 302-1	SHEET
SAMPLING METHOD: <i>Cuttings from Gibson Sampler - Fired</i>	1 or 1C	DRILLING
WATER LEVEL 119.5'	START TIME	FINISH TIME
TIME 00045	000000	1021
DATE 7/1/06	DATE 7/1/06	DATE 7/1/06
REFERENCE 13		

SURFACE CONDITIONS: Sunny, clear, hot; Area with snow in surrounding landscape; Surface covered - sage and dry grasses.





EA ENGINEERING,
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LOG OF SOIL BORING

DRILLING COIN CAVING EXPLORATION
DRILLING (PARTICULAR)

By Phoenix Lopous
Date 5/24/77 Clim Day 1/17

				JOB NO.	CLIENT	LOCATION		
				THASIE	US ATAMA	TEAO-S		
				DRILLING METHOD:		BORING NO.		
						SBC-1		
				SAMPLING METHOD:		SHEET		
						3 or 10		
				DRILLING				
				START	FINISH			
				TIME	TIME			
				DATE	DATE			
				REFERENCE				
				SURFACE CONDITIONS.				
SAMPLER TYPE	INCHES BRITTLE	INCHES CONSISTENT	DEPTH OF CASING	SAMPLE NO.	BLOWS/6 IN. SAMPLER	DEPTH IN FEET	GRAPHIC LOG	
C			8			40		B - Same
			40			1		
						2		
						3		
						4		
						5		9 - Same Grayish Orange 10 yr 7-4
C			9			6		11 ft clay
			45			7		
						8		
						9		
						10		Same as above at 20-25 ft were clay
						11		clay "bits" in sample → moderate brown (5 yr 4/4) clay, firm, dense, dry, plastic
						12		
						13		
						14		
						15		
						16		
						17		
						18		
						19		
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						100		



EA ENGINEERING,
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TECHNOLOGY, INC.

LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

Reference Elevation: _____

Reference Description: _____

JOB NO.	CLIENT	LOCATION
THA 516	USATHAMA	TEAO-S
DRILLING METHOD:	SHEET	
SAMPLING METHOD:	SHEET	
WATER LEVEL:	41 or 10	
TIME	DRILLING	
DATE	START TIME	
REFERENCE	FINISH TIME	

SAMPLE TYPE	MECHANICAL TESTS RESULTS	DEPTH OF CASING	SAMPLE NO.	SAMPLE BLW/B	BLOW/6 IN. SAMPLER	GRAPHIC LOG	SURFACE CONDITIONS:	
							DEPTH IN FEET	CL
C		12 / 60					0	12 - Same as sample No 11
C		13 / 65					1	
C		14 / 70					2	
C		15 / 75					3	
							4	
							5	13 - light brown as above light olive gray clay 5Y 1/4 soft plastic, moist
							6	
							7	* 1000 hrs - pulling rod from hole to clean and inspect bit bit pulled → light olive gray clay on bit rollers, few pieces of gravel (E) 1017 - continue drilling - Driller reports entering gravel layer at 67' BLS
							8	GR
							9	
							10	
							11	14 - light olive gray gravel, silty dry Enter clay layer at 70-71' BLS
							12	
							13	Enter gravel layer at 72' BLS
							14	
							15	
							16	Moderately yellowish brown 610YR 5/4 clay, silty, gravel, some sand, dry Valley Alluvium: alternating layers of clay & gravel from 107'-71' to 80'-00' Gravel like appearance (limestone)
							17	
							18	
							19	
							20	

ANNE'S LOGS

BY 5/18/87

CHECKED BY T.S.

DRILLING CONTINUED
TILLING (100' feet)



EA ENGINEERING,
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LOG OF SOIL BORING

DRILLING CONTINUED ON THIS SHEET (PART 2)

ANDRIJA LAPINS

BY J. T. S. & J. C. DRILLED BY J. T.

		JOB NO. THASIE		CLIENT USATHAMA		LOCATION TEAO-3	
						BORE NO. 3BC-1	
						SHEET	
						6 or 10	
						DRILLING	
						START TIME	FINISH TIME
						DATE	DATE
						REFERENCE	
SAMPLER TYPE	MAIN SHANK SCREWING	DEPTH OF CASING	SAMPLE NO. SHFTIN	BLOWS/6 IN SAMPLER		SURFACE CONDITIONS:	
C	/	20 100			100	20 -	
					1	Fatty-clayey gravel, dry-moist; very pale orange to pale yellowish brown (10 YR 7 1/2)	
					2		
					3		
					4		
C	/	21 105			5	Entered dense heavy gravel at c 602' heavy rig shattering (boulders?)	
					6		
					7		
					8		
					9		
C	/	22 110			10	21 - Same as 20	
					11		
					12		
C	/	23 115			13	22 - Clay, trace gravel, moist, soft plastic, very pale orange to pale yellowish brown (10 YR 7 1/2)	
					14		
					15		
					16		
					17		
					18		
					19		
					20	23 - Same as 22	
					21		
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EA ENGINEERING,
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TECHNOLOGY, INC.

LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

Reference Elevation: _____

Reference Description: _____

JOB NO.	CLIENT	LOCATION
THA 516	USATHAMA	JGAD-3
DRILLING METHOD:		BORING NO.
		SBR-1
SAMPLING METHOD:		SWEEET
		7 or 10
WATER LEVEL		DRILLING
TIME		START TIME
DATE		FINISH TIME
REFERENCE		DATE DATE

SAMPLER TYPE	DEPTH IN FEET	GRAPHIC LOG	SURFACE CONDITIONS:									
			INCHES	DEPTH IN FEET	INCHES	DEPTH IN FEET	INCHES	DEPTH IN FEET	INCHES	DEPTH IN FEET	INCHES	DEPTH IN FEET
C	24 120			120								
				1								
				2								
				3								
				4								
C	25 125			5								
				6								
				7								
				8								
				9								
C	26 127			10								
				11								
				12								
				13								
C	27 135			14								
				15								
				16								
				17								
				18								
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				39								
				40								

Andres Capins

BY DATE 5/15/81 CMC'D BY



EA ENGINEERING,
SCIENCE AND
TECHNOLOGY, INC.

LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

Reference Elevation: _____

Reference Description: _____

JOB NO.	CLIENT	LOCATION
THASIE	USATHAMA	TEAO-S
DRILLING METHOD:	BORE NO.	
	5B-1	
SAMPLING METHOD:	SHEET	
	8 or 10	
WATER LEVEL	START	FINISH
TIME	TIME	TIME
DATE	DATE	DATE
REFERENCE		

SAMPLER TYPE	WEIGHT ON DRILL	DEPTH OF CASING	SAMPLE NO.	SAMPLE DEPTH	BLOWNS/IN. SAMPLER	GRAPHIC LOG	SURFACE CONDITIONS:										
							1	2	3	4	5	6	7	8	9	10	11
C	/	28					146										
		140						1									
								2									
								3									
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BY AUDRIUS LAPIUS

DATE 5/22/07 CED IV

DIGGING EXPLORATORY
BORING (PIT CUT)

Mr. Angelis Arapins
DATE: 5/12/86 CIMA DIV

DRILLING LOG IN LAND EXPLORATORY
Drilling (CAT 577)

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.				JOB NO. THASIE	CLIENT USA THAMA	LOCATION TEAO-S
LOG OF SOIL BORING				DRILLING METHOD:		BORING NO. SBR-1
Co-ordinates: _____				SAMPLING METHOD:		SWEEF
Surface Elevation: _____						10 or 10
Casing Above Surface: _____						DRILLING
Reference Elevation: _____				START	FINISH	
Reference Description: _____				TIME	TIME	
				DATE	DATE	
				REFERENCE		
SAMPLER TYPE	DEPTH OF CASING	DEPTH IN CASING	DEPTH IN SAMPLER	DEPTH IN FEET	GRAPHIC LOG	SURFACE CONDITIONS:
				0		Re-entered site - no water
				1		Reconnect Drill stem to allow air / water through inner stem to flush clays clean
				2		
				3		- Pneumatic did not work
				4		- Departed site to obtain altiropic water level indicator (QED)
				5		check on progress of other rig / place phone calls
				6		C 3 hrs after last attempt at obtaining level measurement ->
				7		water level at 119.5' A.S.L
				8		
				9		Boe hole abandoned -> grouted to land surface
				0		
				1		Grouting completed by injecting grout through in-place drill stem
				2		
				3		Coaster Type I-II cement -> 25 lbs.
				4		Quick Set Bemboite -> 50 lbs.
				5		7/2/86
				6		Grout checked for settlement - settled to 5' RLS
				7		" " topped off " with grout to land surface following set
				8		casing installation for monitoring well (2.5-30' NE of boring)
				9		
				0		



EA ENGINEERING,
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TECHNOLOGY, INC.

LOG OF SOIL BORING

Co-ordinates: _____
 Surface Elevation: _____
 Casing Above Surface: _____
 Reference Elevation: _____
 Reference Description: _____

SURVEY NO.	656111		
DRILLING METHOD	BORING NO		
	SBR-1		
SAMPLING METHOD	SHEET		
WATER LEVEL			
TIME			
DATE			
REFERENCE			

DRILLING CONDITIONS

BY CHIEF DRILLER

DATE

SAMPLER TYPE	DEPTH OF CASING	DEPTH OF SAMPLE IN FT	BLOWNS IN. SAMPLER	DEPTH IN FEET	GRAPHIC LOG	SURFACE CONDITIONS:
				2.0		
				2.1		
				2		
				3		
				4		
C		2.2	250	5	ML	MODERATE YELL-BR 10 YR 5/4 SILT (10%) WITH SME CLAY & TRACE F SAND (25%)
C		3.1	300	29		GRADES TO LESS CLAY
				30	ML	MOD. YELL-BR, 10YR 5/4 SILT + CLAY MIXTURE W. TRACE F SAND (25%) MODERATELY PLASTIC
				1		CAN ROLL SAMPLE #3
				2		DRILLERS DID NOT HAVE ENOUGH SAMPLE CONTAINERS AVAILABLE
				3		SO SAMPLES SPREAD EVENLY ACROSS BORE WITH AVAILABLE CONTAINERS FOR REMAINDER OF BORING
				4		DRILL CUTTINGS MONITORED.
				5		DRILL CUTTINGS INDICATE MORE CLAY
				6		
				7		
				8		
				39		
				40		



EA ENGINEERING,
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LOG OF SOIL BORING

DRILLING CONDITIONS

Co-ordinates: _____

Surface Elevation: _____

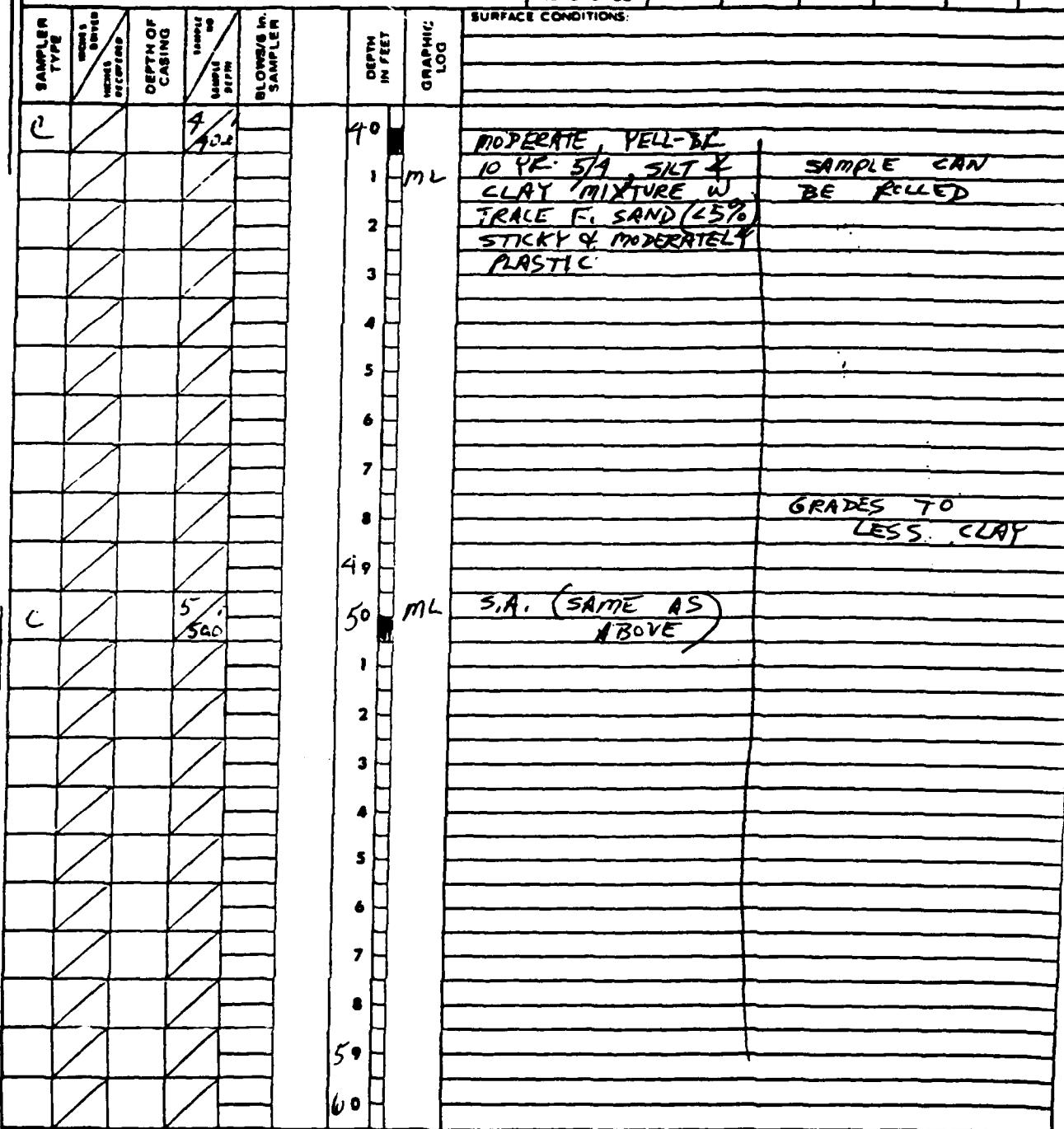
Casing Above Surface: _____

Reference Elevation: _____

Reference Description: _____

DRILLING METHOD	BORE NO	
SAMPLING METHOD	SHEET	
WATER LEVEL	3 or 8	
TIME	DRILLING	
DATE	START TIME	FINISH TIME
REFERENCE	DATE	DATE

BY _____ DATE _____ CHECKED BY _____





**EA ENGINEERING,
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LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

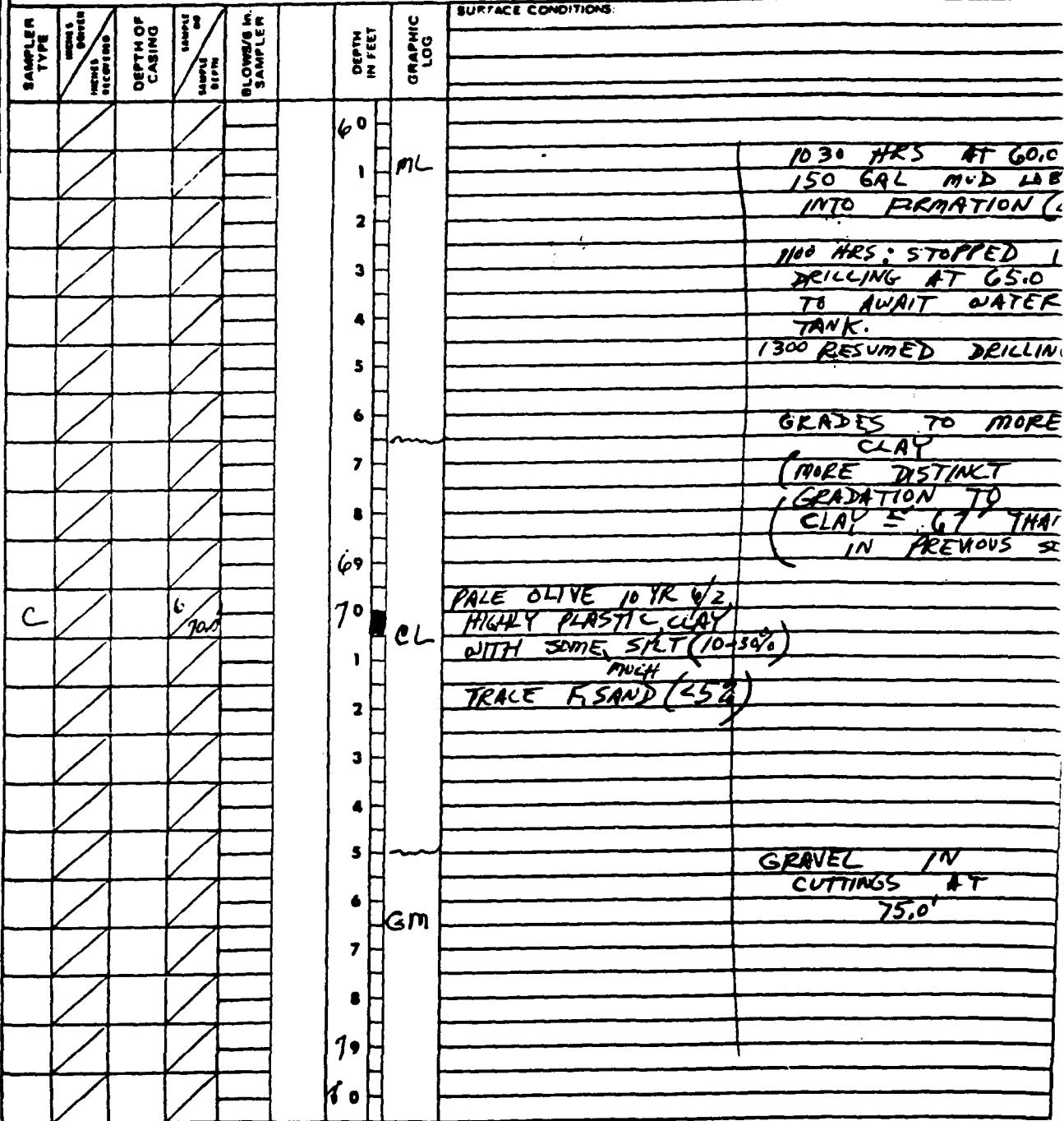
Casing Above Surface: _____

Reference Elevation: _____

SUB HU.	600-001		
DRILLING METHOD			
SAMPLING METHOD			
WATER LEVEL			
TIME			
DATE			
REFERENCE			
BORING NO SBR-1			
SHEET 7 or 8			
DRILLING			
START TIME	FINISH TIME		
DATE	DATE		

—CHMILNE CANTW.

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**EA ENGINEERING,
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LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

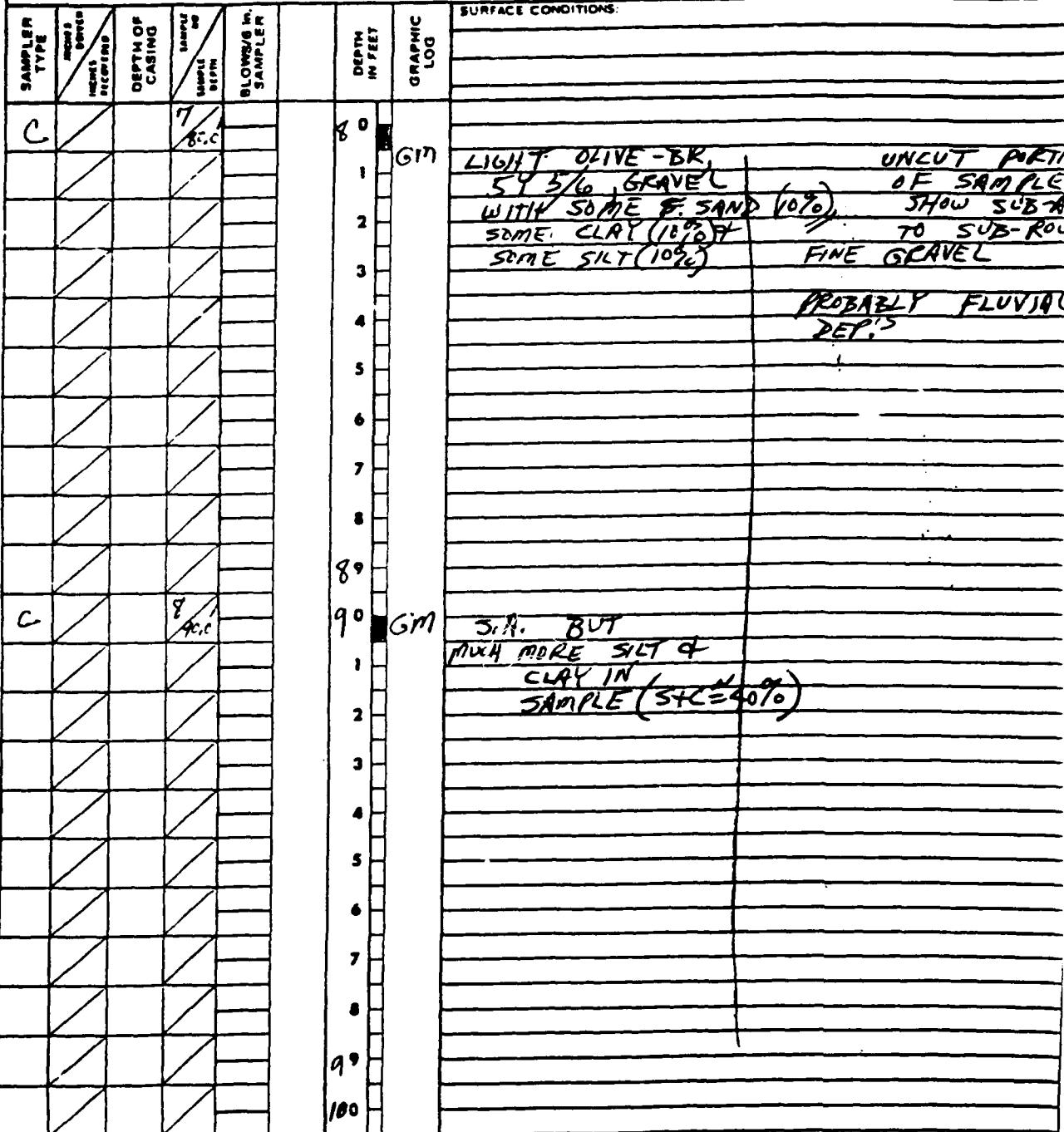
Casing Above Surface: _____

Reference Elevation: _____

JOB NO	CLUB#	LOCATION	
DRILLING METHOD:		BORING NO SBR-1	
		BUCKET	
SAMPLING METHOD:		5 or 8	
		DRILLING	
WATER LEVEL		START TIME	FINISH TIME
TIME			
DATE		DATE	DATE
REFERENCE			

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**EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY, INC.**

LOG OF SOIL BORING

Co-ordinates:

Surface Elevation:

Casing Above Surface:

Reference Elevation: _____

Reference Description:

DRILLING METHOD	BORING NO SBR-1
SAMPLING METHOD	BUCKET 6 or 8
WATER LEVEL	DRILLING
TIME	START TIME
DATE	DATE DA
REFERENCE	

GILDED AGE



**EA ENGINEERING,
SCIENCE AND
TECHNOLOGY, INC.**

LOG OF SOIL BORING

Co-ordinates: _____

Surface Elevation: _____

Casing Above Surface: _____

Reference Elevation: _____

Reference Description: _____

JOB NO	CLIENT	LOCATION
DRILLING METHOD:		BORING NO
		S DR-1
SHEET		
SAMPLING METHOD		7 or 8
DRILLING		
WATER LEVEL		START
TIME		FINISH
DATE		TIME
REFERENCE		DATE

SAMPLER TYPE	WEIGHTS HANGED ON COTTER PIN	DEPTH OF CASING	LAMP NO.	SAMPLE ARM	BLOWNS IN SAMPLER			SURFACE CONDITIONS:
						DEPTH IN FEET	GRAPHIC LOG	
						120		
						1		
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						129		
C	10	130				130	ML	DUSKY-YELLOW, 5% G/G SILT+CLAY MIXTURE WITH 30% F. GRAVEL
						1		
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						130		
						140		



EA ENGINEERING,
SCIENCE AND
TECHNOLOGY, INC.

LOG OF SOIL BORING

Co-ordinates: _____
 Surface Elevation: _____
 Casing Above Surface: _____
 Reference Elevation: _____
 Reference Description: _____

JOB NO.	CLIENT	LOCATION	BORING NO
DRILLING METH. ID		SHEET	
SAMPLING METHOD		8 of 8	
WATER LEVEL		START TIME	FINISH TIME
TIME			
DATE		DATE	DATE
REFERENCE			

SAMPLE TYPE	MATERIAL TESTED	DEPTH OF CASING	SAMPLE LENGTH	BLOW/6 IN. SAMPLER	GRAPHIC LOG	SURFACE CONDITIONS:	
						DEPTH IN FEET	NOTES
						140	
						1	
						2	
						3	
						4	
						5	
						6	
						7	
						8	
						149	
						150	
C	"					1	
						2	
						3	
						4	
						5	
						6	
						7	
						8	
						159	
						160	

BY DATE

CURED BY

7/8

BOREHOLE COMPLETED
TO 1500' BLS, 1600'
FT

WAITED TILL 18:45
HRS FOR WATER
TRUCK TO ARRIVE.
MUD IN HOLE
THINNED OUT W.
WATER BY 1930 HR
SO DOWN-HOLE
GEOPHYSICAL LOGON
COULD BE PERFORMED
HOLE LOGGED FOR
GAMMA RAY, RESIST.
OF ELECTRIC POTENT.
HOLE COVERED
NEXT DAY: 0700 HRS
(7/9/86)
SCHEDUELED 80 FT
(32 SLOT) SET AS
SHOWN IN WELL
DIAGRAM:
40 SCREEN 148.5-
108.5 (LOST 1.5' HOLE)
RISER → T 2.3' A LS.
6 X 9 CSS SAND P.
148.5 → 103.5'

BENTONITE SLURRY ((QUIK-GEL
3/4 bag) + 15 GAL WATER) FROM 103.5-98.5'

PORTLAND CEMENT FROM 98.5' TO LS (1 bag cement : 10 GAL
WATER
(5% BENT POWDER)

ALL SAND, BENT, & CEMENT TREMIED W. 1/2" TREM. PIPE

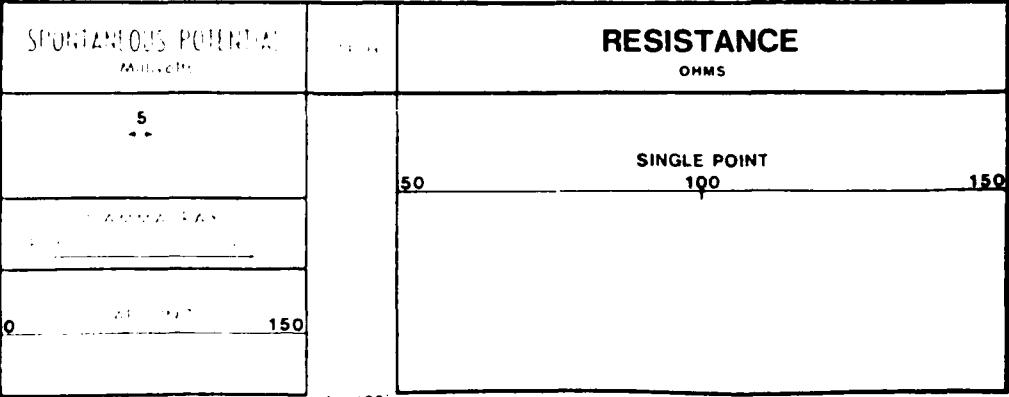
CENTRALIZERS INSTALLED ON PVC AT 100.0' & 10.0'
(18")
TO SPACE SCREEN RISE
FROM INSIDE WALL OF BOREHOLE
BEFORE TREMING SAND, BENT CEM.

NO WATER TABLE INFORMATION COULD BE DETERMINED
DUE TO MUD ROTARY, HOWEVER SCREENING INSTALLED
BASED ON TEST BOREHOLE SBK-1 WHICH INDICATED
STATIC WATER AT 119.5'.

STRATA
DATA INC

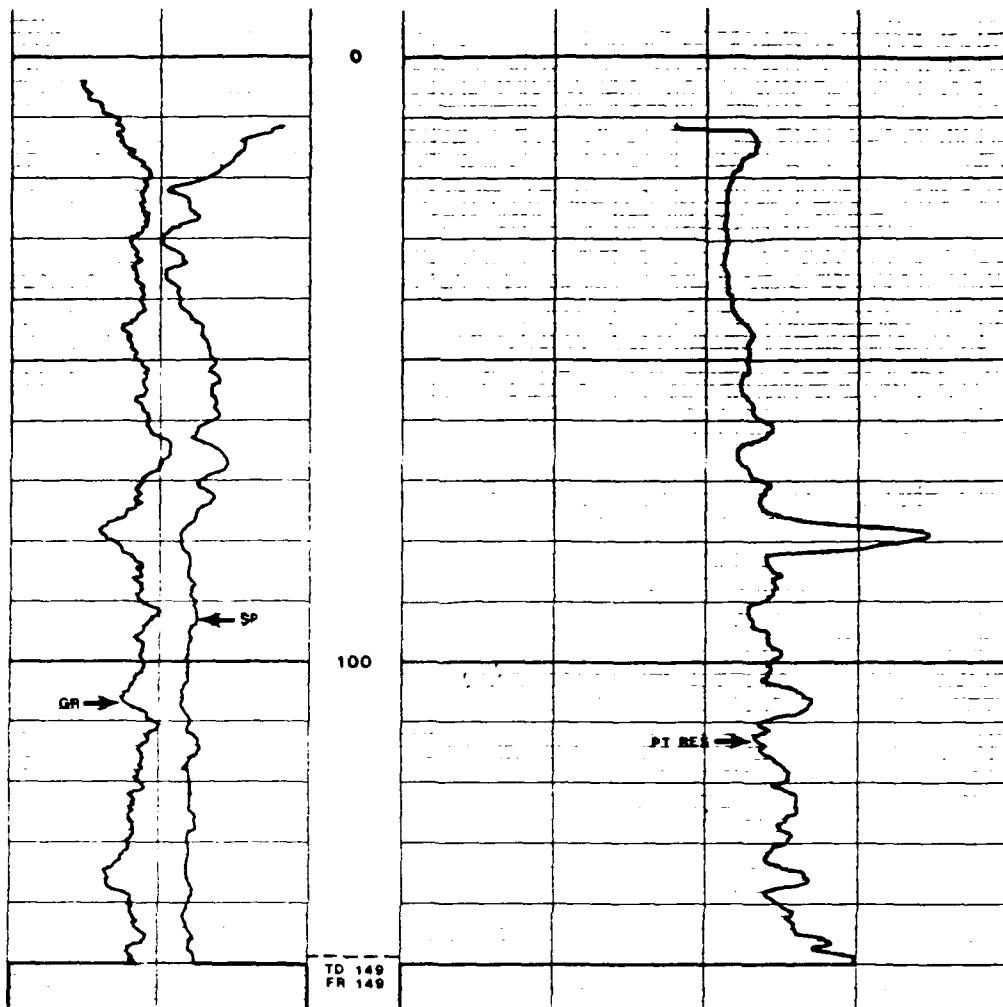
**SINGLE POINT RESISTANCE
WITH S.P. AND GAMMA RAY**

HIE NO. 60088	COMPANY EA SCIENCE & TECHNOLOGY
WELL BBR - 1	FIELD TOOLE SOUTH DEPOT MEGAGRADIENT AREA
COUNTY TOOLE	STATE UTAH
LOCATION 4908.80 N. & 18253.08' E.	BASE COORD. Y 729974.60 X 1759763.94 RGE
SEC TWP	Other Services
Permanent Datum G.L.	Top of Casing Elev 5229.78
Log Measured from G.L.	N/A ft Above Permanent Datum
Drilling Measured from G.L.	0 ft N/A
Date 07/08/86	Drill Bit 5229.78
Run No. ONE	
Depth—Driller 150	
Depth—Logger 149	
Bottom Logged Interval 149	
Top Logged Interval 4	
Logging—Driller 10°	
Logging—Logger 11°	
Bit Size 9 7/8"	
Type Fluid in Hole WINK GEL	
Density and Viscosity N/A	
pH and Fluid Loss N/A	
Source of Sample N/A	
Run @ Motor Temp N/A	
Run @ Mean Temp N/A	
Run @ Max Temp N/A	
Source of Run and Run N/A	
Run to BHT N/A	
Time Since Circ 1 HR.	
Max Rec Temp Deg F N/A	
Equip No. and Location 103 SLC	
Recorded By R. McDONALD	
Witnessed By MR. KOSLOSKI	



MATCH W/ LINE A'

8' = 100'



0	150	
5		100 SINGLE POINT 150
SPONTANEOUS POTENTIAL Millivolts	DEPTH	RESISTANCE OHMS
Company: EA SCIENCE, ENG., & TECH., INC.	Drillers T D	150
V. No.: SBR - 1	Log F R	149
Project: TOOKE SO. DEPOT UPGRADE AREA	Log T D	149
City: TOOKE	Elevations	
State: UTAH	K B	D F
		G I 5229.78

Development
FIELD RECORD OF WELL GAUGING, PURGING AND SAMPLING

Site: TEAD - South Area

Well No: 5BR-1 Gauge Date: 7-16-86 Time: 0930 hrs

Weather: Sunny ~ 90°F

Well Condition: Found cement collar, gravel around casing
4 posts and fence. Locking cap.

Well Diameter (inches): 5" PVC well in 9 7/8" Bore Hole.

Odor (describe): Air
GEO water indicator!

Sounding Method: Water Tape Measurement Reference: Top PVC

Stick up/down (ft): 2.02'

(1) Well Depth (ft): 150.62' Purge Date: 7-31-86 Time: 1050 hrs

(2) Depth to Liquid (ft): 122.2 Purge Method: Cailing w/ 3" x 10' PVC
and pump: 4" Grapheus Sub.

(3) Depth to Water (ft): - Purge Rate (gpm): Varied pump

(4) Liquid Depth [(1)-(2)]: 28.3' Purge Time (min): 7 hrs.

(5) Liquid Volume [(4)xF] (gal): 260.6 Purge Volume (gal): 313 gals.
(5x bore hole min. well volume)

Did Well Pump Dry? Describe: Yes, during purging w/ pump.

well would purge down to bottom. And recharge fairly slowly well
would be allowed to recharge and pumped again.

Samplers: _____

Sampling Date: _____ Time: _____

Sample Type: _____ Split? _____ With Whom: _____

Comments and Observations: _____

Well Development

Well #: SBR-1

Date Well Installed: 7-8-86

Development Time:

7-15-86 : 1500 hrs - 1700 hrs.

7-31-86 : 1050 hrs - 1530 hrs.

Static Water Level:

7-16-86

@ 0930 hrs. 122.2'

7-31-86

@ 1035 hrs. 122.4'

Well and Borehole Vol.

5" PVC well: 28.3" (water column) \times 1.02 gal/ft. = 28.87 gal \times 5 = 144.3 gal.

Annular Vol. Bore

5" PVC well ann.

97.8" O.H. : 28.3" (water column) \times (2.71 gal/ft \times 32% porosity) = 23.3 gal. \times 5 = 116.3 gal.

pH And Spec. Conductivity:

7-31-86 :	Time	pH	Spec. Cond.	Time	pH	Spec Cond.	5" \times borehole and well vol = 260.
	1105	8.73	480		1450	7.53	380
	1405	8.45	440		1510	7.51	390
	1425	7.58	380				

Well Depth and Screen Length:

150.02' w/ 2.02' Stickup (PVC Casing)

40' of well screen

Development Description:

on 7-15-86 w.c. in well was @ ~ 92' Mud in well very thin clumps of bentonite coming out of well. After bailig 70 gal. w.c. was at 143' and discharge becoming thinner ~~at~~ silty. Bailed no more gal. 7-31-86 Started bailig well discharge 5.11 w/ fine sand after 65 gal. discharge was only 51, wly cloudy. Installed 4" pump. Pumped well down real fast. silty w/ sand. Well not a fast recharger. Would pump and have to stopped to let well recharge.

Quantity of Water Removed:

7-15-86 - bailed 90 gal.

7-31-86 - " 68 gal.

pump 155 gal/s.
tot. 313 gal.

} After pumping for 15 hrs. disch. became visibly clear.

APPENDIX II-C
FIELD SURVEYING DATA

Received 2/23/87 LKM



FORSGREN•PERKINS ENGINEERING

OWNER-PROJECT E/A SCIENCE		BY DWF	DATE 2-13-87	PROJECT NO. 863110
FEATURE T.A.D. WELL SITES		CHK'D BY	DATE	SHEET OF
		<i>Scout Area</i>		<i>X = E-W Coordinates Y = N-S Coordinates</i>
U.S.G.S. "Morgan" LAMBERT PCGP 4,302,000000 X ? 1,740,486.800 Y ? 752,574.700 LAT. = 40.00000 23.00000 44.90275 LONG. = 112.00000 25.00000 54.25356 MAP ANGLE = 0.00 -35.00 -48.66 SCALE FACT. = 0.9999467		CAM 3 LAMBERT PCGP 4,302,000000 X ? 1,758,186.498 Y ? 712,673.648 LAT. = 40.00000 17.00000 12.35753 LONG. = 112.00000 22.00000 0.49908 MAP ANGLE = 0.00 -33.00 -18.92 SCALE FACT. = 0.9999299		PERZOMETER LAMBERT PCGP 4,302,000000 X ? 1,758,049.498 Y ? 712,387.720 LAT. = 40.00000 17.00000 9.51882 LONG. = 112.00000 22.00000 2.23104 MAP ANGLE = 0.00 -33.00 -20.02 SCALE FACT. = 0.9999297
CAM 2 LAMBERT PCGP 4,302,000000 X ? 1,758,116.129 Y ? 712,746.439 LAT. = 40.00000 17.00000 13.06957 LONG. = 112.00000 22.00000 1.41636 MAP ANGLE = 0.00 -33.00 -19.51 SCALE FACT. = 0.9999299		CAM 1 LAMBERT PCGP 4,302,000000 X ? 1,758,154.470 Y ? 712,571.000 LAT. = 40.00000 17.00000 11.34010 LONG. = 112.00000 22.00000 0.89940 MAP ANGLE = 0.00 -33.00 -19.10 SCALE FACT. = 0.9999299		-1 LAMBERT PCGP 4,302,000000 X ? 1,758,346.578 Y ? 711,636.539 LAT. = 40.00000 17.00000 2.12388 LONG. = 112.00000 21.00000 58.30389 MAP ANGLE = 0.00 -33.00 -17.52 SCALE FACT. = 0.9999295

APPENDIX II-D
WELL PURGING LOGS



WATER QUALITY SAMPLING FIELD REPORT

TOOELE ARMY DEPOT

TOOELE, UTAH

FIRST QUARTER, 1987

GROUND WATER SAMPLING, INC. FIELD REPORT

:TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL: SBR-1

DATE 02/26/87

CURRENT DATA:

TIME	GAL	EQUIV	W.L.	FLOW RATE		COND	TEMP	OTHER
				GPM	FH			
11:45	...	....	121.90	...	..	....	....	....
11:50				15.00				
11:59	45.00			1.00				
12:02	48.00			1.00				NO WATER
17:02				10.00	7.85	4400		
17:10	128.00			1.00	7.90	4400		
17:17	131.00			1.00	7.90	4400		
17:30	142.00	5.00	121.90	1.00	7.90	4400		FILTERING

OBSERVATIONS:

Filter size: N/A

Pump size: SP-210

T.D.:

Color: CLEAR

Turbidity: BAD

Odor:

Filter condition: POOR

Comments: THREE SETS OF FILTERS: PUMPED WELL DRY ON 2/26; RETURNED
2/27/87

WELL: SBR-1

GROUND WATER SAMPLING, INC. FIELD REPORT

TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:CAM-3

DATE 02/25/87

CURRENT DATA:

TIME	GAL	EQUIV C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
				GPM	FH			
10:00	5.00	---	---	---	7.30	3200	16.0	CALIBRATED
10:05	10.00				7.20	2800		
10:20	15.00				7.05	2400		
10:30	20.00				7.05	2100	17.0	
10:38	25.00				7.05	2100	18.0	
10:44	30.00				7.05	2100	20.0	
10:48	35.00				7.00	2100	22.0	CH CALIB
10:56	40.00				7.00	2100	24.0	
11:00	45.00				7.00	2100	24.0	
11:05	50.00				6.90	2050	24.0	
11:10	55.00				6.95	2000	24.0	
11:15	60.00				6.90	2000	24.0	
11:20	65.00							
11:30	70.00				6.85	1950		RECALIBRATED
11:40	80.00				6.85	1950		
11:45	85.00	5.0			6.85	1950	24.0	BALLED

OBSERVATIONS:

Bailey size:0.5 GAL DYNAMIC Pump size:N/A

T.D.:

Color:GREY Turbidity:MEDIUM Odor:

Filtration:FOOR

Comments:THE OIL AFTER 40 GAL. BAILED: OBSTRUCTION 6' FROM BOTTOM:
INITIALLY MUD SAID CLEARED TO WHITE MURKY: STARTED WITH 1.0
GAL: HAD TO REDUCE SIZE OF BAILEY TO BAIL WELL.

WELL:CAM-3

GROUND WATER SAMPLING, INC. FIELD REPORT

:TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:S-1

DATE 02/25/87

CURRENT DATA:

TIME	GAL	EQUIV	C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
					GPM	PH			
14:20	***	***	***	***	70.00	7.45	4100	***	***
14:26	60.00				10.00	7.45	4000		
14:28	80.00				10.00	7.95	3100		
14:30	100.00				10.00	8.00	3000		
14:32	120.00				10.00	8.00	3000		
14:34	140.00				10.00	8.00	3000		
14:36	160.00	5.00			10.00	8.00	3000	12.0	

OBSERVATIONS:

Bailer size:N/A

Pump size:SP 2-9

T.D.:

Color:CLEAR

Turbidity:CLEAR

Odor:

Filtration:EXCELLENT

Comments:

WELL:S-1

GROUND WATER SAMPLING, INC. FIELD REPORT

TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:S-2

DATE 02/26/87

CURRENT DATA:

TIME	GAL	EQUIV C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
				GPM	PH			
14:45	19.00	----	----	8.00	6.50	5000	----	PUMPED DRY
14:50	29.00			2.00	6.70	5000		
14:55	39.00				6.90	5100		
15:00	51.50			2.50	7.10	4600	13.5	
15:05	64.00				7.20	4600		
15:10	76.50				7.25	4550	13.5	
15:15	88.00				7.30	4500		
15:17	95.00	5.00		2.50	7.30	4500	13.5	SAMPLING

OBSERVATIONS:

Bailer size: 1/2A

Pump size: SP-210

T.D.:

Color: LIGHT BROWN

Turbidity: SLIGHT

Odor:

Filtration: SLOW

Comments: PUMPED DRY; RECHARGE RATE SHOWN

WELL:S-2

GROUND WATER SAMPLING, INC. FIELD REPORT

:TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL: S-2

DATE 02/26/87

CURRENT DATA:

TIME	GAL	EQUIV C.V.	W.L.	FLOW RATE GPM	pH	COND	TEMP	OTHER
07:46	---	5.00	----	8.00	7.20	7500	----	-----
07:53					7.20	7600		
08:00					7.20	7600	13.0	
08:05					7.30	8400		
08:06	100.00				7.30	8800		
08:10	132.00				7.30	8700	13.0	
08:15	152.00				7.40	8500		
08:20	212.00				7.40	8500	13.0 SAMPLING	
08:25	352.00	5.00		8.00	7.40	8500	13.0 FILTERING	

OBSERVATIONS:

Filter size: 1/2"

Pump size: SP-29

T.D.:

Color: CLEAR

Turbidity: CLEAR

Dens:

Filtration: GOOD

Comments: SYSTEM FLUSHED 46 TIMES

WELL: S-2

GROUND WATER SAMPLING, INC. FIELD REPORT

:TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:S-4
DATE 02/27/87

CURRENT DATA:

TIME	GAL	EQUIV	W.L.	FLOW RATE		COND	TEMP	OTHER
				C.V.	GPM				PH
14:15	...	....	59.19	...	..	....	....	CALIBRATED
14:26				9.00	6.70	7800		
14:30	36.00			.50	7.00	7900		NO WATER
14:35	40.00				7.40	8000		
14:50	41.00			.50	7.50	7800	17.0	NO WATER
15:00	42.00			.50	7.55	7700		FEET AFS
15:10	47.00	5.00	58.19	.50	7.55	7700	17.0	SAMPLED

OBSERVATIONS:

Filter size:1/4A

Pump size:SP-210

T.D.:

Color: CLEAR

Turbidity: SLIGHT

Odor:

Filtration:

Comments: SUC. RECHARGE: PUMPED DAY

WELL:E-4

GROUND WATER SAMPLING, INC. FIELD REPORT

:TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:S-5

DATE 02/27/87

CURRENT DATA:

TIME	GAL	EQUIV C.V.	W.L.	FLOW RATE GPM	FH	COND	TEMP	OTHER
12:58	...	....	35.57	...	..	....	....	.....
13:05				10.00	6.70			PUMPING
13:12	20.00			10.00	6.75	14250		
13:16	60.00			10.00	6.80	14250		
13:20	100.00			10.00	7.00	14000	12.5	
13:25	150.00			10.00	7.10	14000		
13:27	170.00			10.00	7.20	14250		
13:30	200.00			10.00	7.20	14250	12.4	
13:32	220.00			10.00	7.20	14250		
13:34	240.00	5.00	35.57	10.00	7.20	14250	12.4	SAMPLED
14:01	240.00	2.00	35.57	10.00	7.20	14250	12.4	FILTERING

OBSERVATIONS:

Bailer size:N/A

Pump size:SF-210

T.D.T.

Color:CLEAR

Turbidity:CLEAR

Odor:

Filtration:GOOD

Comments: GOOD WELL

WELL:S-5

GROUND WATER SAMPLING, INC. FIELD REPORT

TOOELE ARMY DEPOT
NO HISTORICAL DATA:WELL: S-6
DATE 03/02/87

CURRENT DATA:

TIME	GAL	EQUIV	C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
					GPM	PH			
14:45	...	....	....	....	10.00	6.40	14000	....	....
14:54	90.00				2.00	6.60	19500		PUMPED DRY
14:59	100.00				3.00	6.80	>20000		
15:06	110.00				3.00	7.00	>20000	14.0	
15:10	120.00	5.00			3.00	7.00	>20000	14.0	

OBSERVATIONS:

Bailer size:N/A

Pump size:SP-210

T.D.:

Color:

Turbidity:CLEAR

Odor:

Filtration:EXCELLENT

Comments:PUMPED DRY; RECHARGE RATE IMPROVED FROM 2 TO 3 GPM

WELL: S-6

GROUND WATER SAMPLING, INC. FIELD REPORT

TOOELE ARMY DEPOT
NO HISTORICAL DATA:WELL: S-7
DATE 02/27/87

CURRENT DATA:

TIME	GAL	EQUIV C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
				GPM	PH			
08:15	***	****	24.50	10.00	**	****	****	ICE
08:31					6.90			
08:37	70.00			.50	7.10	16000	10.9	PUMPED DRY
08:45	74.00			.50	7.30	16250		
08:50	80.00			.50	7.50	16400		
08:56	81.00			.50	7.50	16800		RECHARGE
09:16	90.00			.50	7.60	16500		RESTART
09:18	95.00	5.00	24.50	.50	7.60	16500	10.9	SAMPLED

OBSERVATIONS:

Bailer size: 1/2 A Pump size: SP-210 T.D.: 54.0'
Color: LT. BEIGE Turbidity: 0.0' Odor:

Filtration:

Comments: N.E. SLOW RECHARGE - .5 GPM; PUMPED DRY; SAMPLED RECHARGED
WATER

WELL: S-7

GROUND WATER SAMPLING, INC. FIELD REPORT

TOOELE ARMY DEPOT
NO HISTORICAL DATA:WELL: S-8
DATE 02/26/87

CURRENT DATA:

TIME	GAL	EQUIV C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
				GPM	PPM			
10:03	***	****	73.30	10.00	8.30	1600	****	CALIBRATED
10:06	16.00			1.00	8.40	1500		PUMPED DRY
10:12	22.00			1.00		1500		RECHARGE
10:20	26.00			1.00	8.40	1230		
10:25	35.00			1.00	8.70	1140	10.5	
10:30	40.00			1.00	8.10	1110		
10:35	45.00			1.00	8.00	1120		
10:40	50.00			1.00	7.90	1120		
10:45	55.00			1.00	7.90	1120		
10:50	60.00			1.00	7.40	1120		
10:55	65.00			1.00	7.40	1120	10.5	
11:00	73.00			1.00	7.40	1120		
11:05	75.00	2.00	77.30	1.00	7.40	1120	10.5	SAMPLE

OBSERVATIONS:

Bottom size: 4

Pump size: SF 4-14

T.D.: 137.45'

Color: BROWN

Turbidity: MEDIUM

Dens:

Filtration: SLOW

Comments: RECHARGE RATE: 1 GFM; PUMPED DRY,

WELL: S-8

GROUND WATER SAMPLING, INC. FIELD REPORT

TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:S-10

DATE 02/27/87

CURRENT DATA:

TIME	GAL	EQUIV	C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
					GPM	PH			
15:45	...	....	....	68.46	...	...	....	....	....
15:56	99.00				9.00				PUMPING
15:59	126.00				9.00	8.30	420	12.0	
16:01	144.00				9.00	8.10	400		
16:03	162.00				9.00	8.10	400	12.0	
16:05	180.00				9.00	8.05	400		
16:07	198.00				9.00	8.00	400		
16:09	216.00				9.00	8.00	400	10.5	
16:11	234.00				9.00	8.00	400	10.5	
16:12	242.00	5.00		68.46	9.00	8.00	400	10.5	SAMPLE

OBSERVATIONS:

Bottom size: 11" A

Pump size: SP-210

T.D.:

Color: CL/BROWN, GREY

Turbidity: CLEAR/BAI

Dens:

Filtration:

Comments: CHANGE OF WATER COLOR AT 35 GAL AND 137 GAL.

WELL:S-10

GROUND WATER SAMPLING, INC. FIELD REPORT

:TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:S-12

DATE 02/27/87

CURRENT DATA:

TIME	GAL	EQUIV	C.V.	W.L.	FLOW RATE		COND	TEMP	OTHER
					GPM	PH			
10:18	***	****	****	***	**	****	****	****	****
10:19					10.00	6.60	12600		
10:21						1.00			
10:23	35.00				2.50	6.80	12400		BR/GRY MUD
10:28	45.50				3.33	6.85	12800		
10:33	68.25				3.33	6.90	13000		
10:37	84.25				4.00	7.10	12800		
10:41	100.00				4.00	7.15	13500	11.5	
10:49	152.00				4.00	7.20	12400	11.5	
11:20	252.00	5.00			4.00	7.20	12400	11.5	FILTERING

OBSERVATIONS:

Bore size: 11" A

Pump size: SP-21C

T.D.: 140'

Color: LT GREY

Turbidity: MED - CLEARED

Odor:

Filtration: 4 SETS OF FILTERS REQUIRED

Comments: DEVELOPED WELL BY PUMPING - INCREASED 1 GPM TO 4 GPM: HIGH CONDUCTIVITY

WELL:S-12

GROUND WATER SAMPLING, INC. FIELD REPORT

:TOOELE ARMY DEPOT
NO HISTORICAL DATA:

WELL:S-14

DATE 02/27/87

CURRENT DATA:

TIME	GAL	EQUIV C.V.	W.L.	FLOW RATE GPM		PH	COND	TEMP	OTHER
							
11:44	...	....	10.08	10.00	...	....	....	....	PUMPING
11:47	30.00				6.00	>20000			
11:48	40.00				6.10	>20000			
11:50	55.00				6.25	>20000	10.3		
11:55	110.00				6.60	49.600	*		
11:57	130.00				6.85	74000	*		
00:00	150.00				6.95	74000	9.5 *		
12:00	160.00	5.07	10.08	10.00	7.00	74000	9.5 SAMPLING		

OBSERVATIONS:

Bacter size:N/A

Pump size:SP-210

T.D.:

Color:CLEAR

Turbidity:

Odom:

Filtration:0

Comments:DEVELOPED WELL: VERY HIGH CONDUCTIVITY: *BY DILUTION 1:4

WELL:S-14

APPENDIX II-B

**INSTALLATION RESTORATION DATA MANAGEMENT SYSTEM (IRDMS)
CHEMICAL DATA, DEFINITIONS, AND CERTIFIED REPORTING LIMITS**

ORIGINAL RUNID- IRR09

DATE - 25 AUG 88 TIME - 09:13:49

COPIES REQUESTED: 002

US ARMY AMCCOM ABERDEEN PROVING GROUND - EDGEWOOD AREA SCIENTIFIC COMPUTER CENTER - - - UNIVAC 1100/70 LEVEL 39R3D

- XEROX 9700 ELECTRONIC PRINTING SYSTEM -

RUN DATE : 25 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOLE AD (SOUTH AREA)

CSW ANALYTICAL RPT 15

SITE TYPE POND

SITE ID 5 EXCR 1

DESCRIPTION

SAMPLE PROG	SAMPLE DATE	LAB	NAME	NUMBER	SAMPLE DEPTH(FT)	MEAS B001	LONGINIRATION	UNITS MEAS
GQA	03/02/87	ET	AG	99	5	GT	4 .0000	UGL
			AS		5		70 .0000	UGL
			BE		5	1	8300	UGL
			BR		5		300 .0000	UGL
			CD		5	1	10000000 .0000	UGL
			CL	99	5	1	43 .0000	UGL
			CPMS		5	1	79 .6000	UGL
			CPMS0		5	1	30 .8000	UGL
GQA	02/27/87	ET	CR	99	5	1	10 .8000	UGL
			CU		5	1	21 .3000	UGL
			CYN		5	1	29 .5000	UGL
			DIMP		5	1	23 .3000	UGL
			E		5	1	360 .0000	UGL
			IMX		5	1	5 .0700	UGL
			NA		5	1	3300000 .0000	UGL
			NIT		5	1	60 .0000	UGL
			FB		5	1	3 .6000	UGL
			PHENOL		5	1	870 .0000	UGL
			POORI		5	1	56 .9000	UGL
			RDX		5	1	4 .1900	UGL
			SB		5	1	7 .0000	UGL
			SE		5	1	2 .5300	UGL
			TDGCL		5	1	720 .0000	UGL
			TERYL		5	1	4 .3900	UGL
			TL		5	1	1 .7000	UGL
			TRC1.E		5	1	1 .9000	UGL
			ZN		5	1	20 .0000	UGL
			13DDNB		5	1	9 .0800	UGL
			135TNB		5	1	5 .8400	UGL
			24DNT		5	1	2 .2200	UGL
			246TNT		5	1	6 .2500	UGL
			26DNT		5	1	5 .7000	UGL
			SO ₄		5	1	33000000 .0000	UGL
			BA		5	1	31 .0000	UGL

PAGE NO 2

RUN DATE 25 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOLIE AD (SOUTH AREA)

CSW ANALYTICAL RESULTS

SITE TYPE POND

SITE ID S FCR 2

DESCRIPTION

SAMPLE PROG	SAMPLE DATE	LAR	NAME	MATERIAL NUMBER	SAMPLE ID (P/N#)	MEAS R001	C. CONCENTRATION	UNITS MEAS	INIT STD
GQA	03/02/87	ET	AG	99	5	11	30 .0000	UGL	
			AS		5	11	2 .2600	UGL	
			BF		5	62	2000 .0000	UGL	
			BR		5	11	11 .9000	UGL	
			CD		5	11	43 .4000	UGL	
			CPMS		5	11	79 .6000	UGL	
			CPMS0		5	11	30 .8000	UGL	
			CPMS02		5	11	10 .8000	UGL	
			CR		5	11	21 .3000	UGL	
			CU		5	11	29 .5000	UGL	
			CYN		5	11	23 .3000	UGL	
			DIMP		5	11	360 .0000	UGL	
			F		5	11	5 .0700	UGL	
			HMX		5	11	65 .2000	UGL	
			NI		5	11	40 .0000	UGL	
			NIT		5	11	1 .7000	UGL	
			PB		5	11	870 .0000	UGL	
			PHENIC		5	11	56 .9000	UGL	
			PO4ORT		5	11	4 .1900	UGL	
			RDX		5	11	7 .0000	UGL	
			SB		5	11	2 .5300	UGL	
			SE		5	11	720 .0000	UGL	
			TDGCL		5	11	4 .3900	UGL	
			TETRYL		5	11	1 .7000	UGL	
			TL		5	11	1 .9000	UGL	
			TRCIE		5	11	30 .0000	UGL	
			ZN		5	11	9 .0800	UGL	
			13DNB		5	11	5 .8400	UGL	
			135TB		5	11	2 .2200	UGL	
			24DN		5	11	6 .2500	UGL	
			246TNT		5	11	5 .7000	UGL	
			26DNT		5	11	2300000 .0000	UGL	
			SO4		5	11	65 .0000	UGL	
			BA		5	11	6000 .0000	UGL	
			CL						

PAGE NO: 3

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ORIGINAL RUNID- IRPROJ DATE 24 AUG 88 TIME 13:32:46 COPIES REQUESTED- 001
US ARMY AMCCOM ABERDEEN PROVING GROUND - EDGEWOOD AREA SCIENTIFIC COMPUTER CENTER - - - UNIVAC 1100/70 LEVEL 39R3D
- - - XEROX 9700 ELECTRONIC PRINTING SYSTEM - - -

RUN DATE 04 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOL AD (SOUTHERN AREA)

CIR ANALYTICAL SERVICES INC.

SLIT TYPE WEL

SLIT ID S CAM 3

DESCRIPTION

PAGE NO 1

SAMPLE FROM,	SAMPLE DATE	LAB	NAME	MEAS NR	SAMPLE DESCRIPTION	MEAS RUL	CONCENTRATION	UNITS MEAS	INT ST
GQA	02/25/87	ET	AG	91			4200	UGL	S
			ANTR	91			3.0000	UGL	
			AS	91			400.0000	UGL	
			RA	91			200.0000	UGL	
			RE	91			1.2000	UGL	
GQA	02/28/87	ET	BR	91			244.0000	UGL	S
GQA	02/25/87	ET	B2FHD	91			2.0000	UGL	
			CD	91			11.9000	UGL	
			CL	91			83500.0000	UGL	
			C.PMS	91			43.4000	UGL	
			C.PMSO	91			79.6000	UGL	
			C.PMSO2	91			30.9000	UGL	
			CR	91			21.0000	UGL	
			CU	91			21.3000	UGL	
			DBZFUR	91			10.0000	UGL	S
			F	91			3100.0000	UGL	
			FLRFNF	91			20.0000	UGL	S
GQA	02/26/87	ET	WAX	99			5.0700	UGL	
GQA	02/25/87	ET	NA	99			173000.0000	UGL	S
			NAP	91			100.0000	UGL	
			NI	91			65.2000	UGL	
			NT	91			10.0000	UGL	
			PB	91			31.0000	UGL	
			PHAJR	91			60.0000	UGL	S
			PHENIC	91			870.0000	UGL	
			PIQUOT	91			120.0000	UGL	
GQA	02/26/87	ET	RDX	91			4.1900	UGL	
GQA	02/25/87	ET	SB	99			7.0000	UGL	
			SE	91			2.5300	UGL	
			S04	91			250000.0000	UGL	
			TDGCI	91			720.0000	UGL	
			TERYL	99			4.3900	UGL	
			TL	99			1.7000	UGL	
			ZN	91			114000.0000	UGL	
GQA	02/26/87	ET	13DNB	99			9.0800	UGL	
			135NB	91			5.8400	UGL	
			2MMAP	99			200.0000	UGL	
			24DNIT	99			2.2200	UGL	
			26DNIT	91			14.2000	UGL	
			ANAPNE	91			5.7000	UGL	
			C6H6	91			40.0000	UGL	
			ETC6HS	91			6.0000	UGL	
			DIMP	91	LT		23.3000	UGL	

RUN DATE 24 AUG 88

INSTILLATION RESTORATION PROGRAM

TOOL AD (SOUTH ARFA)

CGW ANALYTICAL RESULTS

SITE TYPE WELL

SITE ID S SRR 1

DESCRIPTION

SAMPLE NUMBER	SAMPLE DATE	LAR NAME	MATERIAL NUMBER	SAMPLE DEPTH(FT)	MFAS RODI	CHIEF ILLUMINANT	UNITS MFAS	UNITS NI MFAS
112A	02/27/87	F T	AG AS	119.4	11	R RDX	1400	UGL
			BA	119.4	GT	2000 0000	UGL	
			BBZP	119.4		5 0000	UGL	5
			BF	119.4	11	8300	UGL	
			BR	119.4	11	244 0000	UGL	
			B2FHBP	119.4		7 0000	UGL	
			CD	119.4	11	11 9000	UGL	
			CL	119.4	11	1300000 0000	UGL	
			C.PMS	119.4	11	43 4000	UGL	
			CPMSO	119.4	11	79 6000	UGL	
			CPMSO?	119.4	11	3 8000	UGL	
			CR	119.4		31 0000	UGL	
			CU	119.4		22 0000	UGL	
			CVN	119.4	11	29 5000	UGL	
			DIMP	119.4	11	23 3000	UGL	
			F	119.4		600 0000	UGL	
			HMX	119.4	11	5 0700	UGL	
			MECABIS	119.4		7 0000	UGL	5
			NA	119.4		29000 0000	UGL	
			NI	119.4	11	65 2000	UGL	
			NIT	119.4		1300 0000	UGL	
			PB	119.4	11	7 8000	UGL	
			PHENOL	119.4	11	870 0000	UGL	
			PODORT	119.3		56 9000	JGL	
			RDX	119.4	11	4 1900	UGL	
			SE	119.4	11	7 0000	UGL	
			TGCL	119.4	11	2 5300	UGL	
			TETRY1	119.4	11	720 0000	UGL	
			TL	119.4	11	4 3900	UGL	
			ZN	119.4	11	1 7000	UGL	
			13DNB	119.4	11	110 0000	UGL	
			135INR	119.4	11	9 0800	UGL	
			24DN	119.4	11	5 8400	UGL	
			246INT	119.4	11	2 5000	UGL	
			26DN	119.4	11	6 2500	UGL	
			SO4	119.4	11	5 7000	UGL	
						164000.0000		

RUN DATE 24 AUG 88

INSTILLATION RESTORATION PROGRAM

100FL F AND 150FL F (APFA)

CGW ANALYTICAL RESULTS

SILICATE TYPE WELLS

STUFF ID S-1

DESCRIPTION 151 INGL X, Y, Z, T

SAMPLE PROG	SAMPLE DATE	LAB	NAME	MEASURE NUMBER	SAMPLE DIFFERENT	MEAS RATIO	CONCENTRATION	UNITS MEAS	INF STD
GDA	02/25/87	ET	AG	99	4-4		260.0000	UGL	
			AS		4-4		32.0000	UGL	
GDA	02/28/87	ET	BR	99	4-4	1.1	6.28.0000	UGL	
GDA	02/25/87	ET	B2EMD	99	4-4		3.3.0000	UGL	5
			CD		4-4		12.0000	UGL	
			CL		4-4		350000.0000	UGL	
			CPMS		4-4	1.1	4.3.4000	UGL	
			CPMS50		4-4	1.1	79.6000	UGL	
			CPMS502		4-4	1.1	30.8000	UGL	
			CR		4-4	1.1	10.8000	UGL	
			CU		4-4	1.1	21.3000	UGL	
			F		4-4	1.1	2700.0000	UGL	
			HMX	99	4-4	1.1	5.0700	UGL	
GDA	02/26/87	ET	NA	99	4-4	1.1	381000.0000	UGL	
GDA	02/25/87	ET	NI	99	4-4	1.1	65.2000	UGL	
			NIT		4-4		190.0000	UGL	
			PB		4-4	1.1	46.9000	UGL	
			PHENIC		4-4		870.0000	UGL	
			P04GR1		4-4		190.0000	UGL	
GDA	02/26/87	ET	RDX	99	4-4	1.1	4.1900	UGL	
GDA	02/25/87	ET	SB	99	4-4	1.1	7.0000	UGL	
			SE		4-4		2.5300	UGL	
GDA	02/26/87	ET	SO4	99	4-4	1.1	620000.0000	UGL	
GDA	02/25/87	ET	TOGCL	99	4-4	1.1	720.0000	UGL	
GDA	02/26/87	ET	TETRY1	99	4-4	1.1	4.3900	UGL	
GDA	02/25/87	ET	TL	99	4-4	1.1	1.7000	UGL	
			ZN		4-4	1.1	14.3000	UGL	
GDA	02/26/87	ET	13DNB	99	4-4	1.1	9.0800	UGL	
			135INR		4-4	1.1	5.8400	UGL	
			24DN1		4-4	1.1	2.2200	UGL	
			246TN1		4-4	1.1	6.2500	UGL	
			26DN1		4-4		20.5000	UGL	
GDA	02/26/87	ET	SO4		4-4		620000.0000	UGL	
			DIMP		4-4	LT	23.3000	UGL	

PAGE NO 3

RUN DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOLFILE A) (SOUTH A.F.A.)

CGW ANALYTICAL RESULTS

SITE TYPE : WFL

SITE ID : S 3

DESCRIPTION : 7.7

PAGE NO. 5

SAMPLE PROG	SAMPLE DATE	LAR	NAME	MFTH NUMR	SAMPLE DEPTH(FT)	MFAS RTN1	CONCENTRATION	UNITS	INT STD
CGA	02/26/87	F1	AG	77	22.6		1800	UGL	
			AS	77	22.6		30.9000	UGL	
			BA	77	22.6		21.0000	UGL	
			BB/P	77	22.6		2	UGL	5
			BF	77	22.6		8300	UGL	
			BR	77	22.6		1990.0000	UGL	
			CI	77	22.6		3200000.0000	UGL	
			CPMS	77	22.6		43.4000	UGL	
			CPMS/02	77	22.6		79.6000	UGL	
			CR	77	22.6		30.8000	UGL	
			CU	77	22.6		10.8000	UGL	
			F	77	22.6		25.0000	UGL	
			HMX	77	22.6		1110.0000	UGL	
			NI	77	22.6		5.0700	UGL	
			NIT	77	22.6		66.0000	UGL	
			PR	77	22.6		350.0000	UGL	
			PHE/NIC	77	22.6		1.5000	UGL	
			PO4OPr	77	22.6		870.0000	UGL	
			RDx	77	22.6		70.0000	UGL	
			SB	77	22.6		- 4.1900	UGL	
			SE	77	22.6		7.0000	UGL	
			TDGCL	77	22.6		- 2.5300	UGL	
			TERYL	77	22.6		720.0000	UGL	
			TL	77	22.6		4.3900	UGL	
			ZN	77	22.6		2.7000	UGL	
			13DNB	77	22.6		20.0000	UGL	
			135TNR	77	22.6		9.0800	UGL	
			24DNT	77	22.6		5.8400	UGL	
			246TNT	77	22.6		2.2200	UGL	
			26DNT	77	22.6		6.2500	UGL	
			SO4	77	22.6		5.7000	UGL	
			DIMP	77	22.6		900000.0000	UGL	
							23.0000	UGL	

RUN DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOL F A1: (SOUTH AREA)

CGW ANALYTICAL PROGRAM

SITE TYPE Well

SITE ID S-A

DESCRIPTION 1,1

SAMPLE PROG	SAMPLE DATE	LAR	NAME	MATERIAL NUMBER	SAMPLE DESCRIPTION	WEIGHT (g)	MASS (g)	CONCENTRATION	UNITS MEAS	INITIAL STN
GJA	02/27/87	FT	AG	57.2	57.2	0.1	0.1	372.0000	UGL	
			AS	57.2	57.2			140.0000	UGL	
			BA	57.2	57.2			20.0000	UGL	5
			RBZP	57.2	57.2	1.1	1.1	2000.0000	UGL	
			BF	57.2	57.2			8300.0000	UGL	
			BR	57.2	57.2			7.0000	UGL	
			R2A1C	57.2	57.2			90.0000	UGL	5
			B2E1P	57.2	57.2			11.9000	UGL	
			CD	57.2	57.2	1.1	1.1	1500000.0000	UGL	
			CL	57.2	57.2	1.1	1.1	43.4000	UGL	
			CPMS	57.2	57.2			79.6000	UGL	
			CPMS01	57.2	57.2	1.1	1.1	30.8000	UGL	
			CPMS02	57.2	57.2	1.1	1.1	16.0000	UGL	
			CR	57.2	57.2			29.0000	UGL	
			CU	57.2	57.2	1.1	1.1	29.5000	UGL	
			CYN	57.2	57.2	1.1	1.1	23.3000	UGL	
			D1MP	57.2	57.2			1400.0000	UGL	
			F	57.1	57.1	1.1	1.1	1.1000	UGL	
			HG	57.2	57.2	1.1	1.1	5.0700	UGL	
			HMX	57.2	57.2			3.0000	UGL	
			MEC645	57.2	57.2			1010000.0000	UGL	
			NA	57.2	57.2	1.1	1.1	65.2000	UGL	
			NI	57.2	57.2	1.1	1.1	636.0000	UGL	
			NIT	57.2	57.2	1.1	1.1	3.7000	UGL	
			PB	57.2	57.2	1.1	1.1	870.0000	UGL	
			PHENIC	57.2	57.2			140.0000	UGL	
			PO4ORI	57.2	57.2	1.1	1.1	4.1900	UGL	
			RDX	57.2	57.2			7.0000	UGL	
			SB	57.2	57.2			2.5300	UGL	
			SE	57.2	57.2	1.1	1.1	120.0000	UGL	
			TFGCL	57.2	57.2	1.1	1.1	4.3900	UGL	
			TRYYL	57.2	57.2			3.1000	UGL	
			TL	57.2	57.2			160.0000	UGL	
			ZN	57.2	57.2	1.1	1.1	9.0800	UGL	
			13DNB	57.2	57.2			5.8400	UGL	
			135TNB	57.2	57.2			2.2200	UGL	
			24DNT	57.2	57.2	1.1	1.1	6.2500	UGL	
			246INT	57.2	57.2			5.7000	UGL	
			26DNT	57.2	57.2			2500000.0000	UGL	
			S04	57.2	57.2					

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PRINT DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOLE AD (SOUTH AREA)

CGW ANALYTICAL RESULTS

SITE TYPE WFL

SITE ID S 5

DESCRIPTION 7.7

SAMPLE PROG	SAMPLE DATE	LAB	NAME	METH NUMBER	SAMPLE DEPTH(Ft)	MEAS RODI	CONCENTRATION	UNITS MEAS	INT STD
CJA	02/27/87	E1	AG	99	34.3		154.0000	UGL	
			AS	34.3			34.0000	UGL	
			BA	34.3			2.0000	UGL	\$
			BBTR	34.3					
			BE	34.3	TT				
			BR	34.3			28000.0000	UGL	
			R2F1P	34.3			30.0000	UGL	\$
			CD	34.3	TT		11.9000	UGL	
			CL	34.3			280000.0000	UGL	
			CPMS	34.2	TT		43.4000	UGL	
			CPMSD	34.2	TT		79.6000	UGL	
			CPMSO?	34.2	TT		30.8000	UGL	
			CR	34.3			16.0000	UGL	
			CU	34.3			23.0000	UGL	
			CYN	34.3	TT		29.5000	UGL	
			DIMP	34.3	TT		23.3000	UGL	
			F	34.3	TT		2000.0000	UGL	
			HMX	34.3	TT		5.0700	UGL	
			NA	34.3			1000000.0000	UGL	
			NI	34.3	TT		65.2000	UGL	
			NI1	34.3	TT		2302.0000	UGL	
			PR	34.3	TT		1.5000	UGL	
			PHENLC	34.3	TT		870.0000	UGL	
			PO4ORT	34.3	TT		70.0000	UGL	
			RDX	34.3	TT		4.1900	UGL	
			SB	34.3	TT		7.0000	UGL	
			SE	34.3	TT		2.5300	UGL	
			TDGCL	34.3	TT		720.0000	UGL	
			TEHQYL	34.3	TT		4.3900	UGL	
			TL	34.3			3.1000	UGL	
			ZN	34.3			80.0000	UGL	
			13DNB	34.3	TT		9.0800	UGL	
			135TNR	34.3	TT		5.8400	UGL	
			24DNT	34.3	TT		2.2200	UGL	
			246TNT	34.3	TT		6.2500	UGL	
			26DNJ	34.3	TT		5.7000	UGL	
			SO4	34.3			1860000.0000	UGL	

RUN DATE 24 AUG 88

INITIATION, RESTORATION PROGRAM

PAGE NO 8

TOOL ID (SOUTH AREA)

CGW ANALYTICAL RESULTS

SITE TYPE WELL

SITE ID S 6

DESCRIPTION 7.7

SAMPLE PROG	SAMPLE DATE	LAB	NAMF	MATERIAL NUMBER	SAMPLE ID(F/F)	MEAS POOL	CONFIRMATION	UNITS MEAS	INT SID
60A	03/02/87	F1	AG	Q1	15.3	G1	4	0.0000	UGL
			AS		15.3		10	0.0000	UGL
			RA		15.3		5	0.0000	UGL
			BBZP		15.3		8.3000	UGL	S
			BT		15.3	TT			
			BR		15.3		390	0.0000	UGL
			CD		15.3	TT	11	9.0000	UGL
			CL		15.3	TT	12000000	0.0000	UGL
			CYMS		15.3	TT	43	4.0000	UGL
			CPMS0		15.3	TT	79	6.0000	UGL
			CPMS02		15.3	TT	30	8.0000	UGL
			CR		15.3	TT	10	8.0000	UGL
			CU		15.3	TT	21	3.0000	UGL
			CYN		15.3	TT	29	5.0000	UGL
			DIMP		15.3	TT	23	3.0000	UGL
			F		15.3	TT	1500	0.0000	UGL
			HMX		15.3	TT	5	0.790	UGL
			MEC6145		15.3	TT	-	8.00-20	UGL
			NA		15.3	TT	5700000	0.0000	UGL
			NI		15.3	TT	65	2000	UGL
			NIT		15.3	TT	110	0.0000	UGL
			PB		15.3	TT	3	4.000	UGL
			PHENOL		15.3	TT	870	0.0000	UGL
			P040RT		15.3	TT	180	0.0000	UGL
			RDX		15.3	TT	4	1.900	UGL
			SB		15.3	TT	7	1.000	UGL
			SE		15.3	TT	2	5.300	UGL
			TDGC1		15.3	TT	720	0.0000	UGL
			TE1R1		15.3	TT	4	3.900	UGL
			TL		15.3	TT	1	7.000	UGL
			TRCL1		15.3	TT	1	9.000	UGL
			ZN		15.3	TT	30	0.0000	UGL
			13DNB		15.3	TT	9	0.0800	UGL
			135TNB		15.3	TT	5	8.400	UGL
			24DN		15.3	TT	3	3.000	UGL
			246INT		15.3	TT	6	2.500	UGL
			26DN		15.3	TT	5	7.000	UGL
			SO4		15.3	TT	4450000	0.0000	UGL

RUN DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOL FAD (SOUTH AREA)

CGW ANALYTICAL PROCESSING

SITE TYPE WFL

SUIT ID S 7

DESCRIPTION 7.7

PAGE NO 9

SAMPLE NUMBER	SAMPLE DATE	LAB	NAMF	METH NMR	SAMPLE NUMBER	MEAS R001	CONCENTRATION	UNITS MEAS	INIT STD
C1A	02/27/87	FT	AG	99	22.8		1.6700	UGL	
		AS		22.8			54.0000	UGL	
		RA		22.8			103.0000	UGL	
		RRP		22.8			7.0000	UGL	
		BE		22.8			8.3000	UGL	
		RR		22.8			710.0000	UGL	
		R2FIR		22.8			6.0000	UGL	
		CD		22.8			44.0000	UGL	
		CL		22.8			11.9000	UGL	
		CPMS		22.8			43.4000	UGL	
		CPMS0		22.8			71.6000	UGL	
		CPMS02		22.8			30.8000	UGL	
		CR		22.8			10.8000	UGL	
		CL1		22.8			90.0000	UGL	
		CYN		22.8			29.5000	UGL	
		DIMC		22.8			23.3000	UGL	
		F		22.8			600.0000	UGL	
		HMX		22.9			5.0700	UGL	
		NA		22.8			200000.0000	UGL	
		NI		22.8			65.2000	UGL	
		NTT		22.8			.4500.0000	UGL	
		PB		22.8			4504.9000	UGL	
		PHENIC		22.8			870.0000	UGL	
		PO4OR1		22.8			80.0000	UGL	
		RDX		22.9			4.1900	UGL	
		SB		22.8			7.0000	UGL	
		SE		22.8			2.5300	UGL	
		TGCL		22.8			720.0000	UGL	
		TERYL		22.9			4.3900	UGL	
		TL		22.8			3.2000	UGL	
		ZN		22.8			120.0000	UGL	
		13DNE		22.9			9.0800	UGL	
		135TNE		22.9			5.8400	UGL	
		2MP		22.8			5.0000	UGL	
		24DNT		22.9			2.2200	UGL	
		246TNT		22.9			6.2500	UGL	
		260NT		22.9			5.7000	UGL	
		SO4					416000.0000		
							22.9		

RUN DATE 24 AUG 88

INSTALATION RESTORATION PROGRAM

DOOLY ADD SOUTH AREA

CGW ANALYTICAL RESULTS

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SUIT L S R

DESCRIPTION 7.7
7.7

PAGE NO 10

SAMPLE PROG	SAMPLE DATE	LAR	NAME	METH NUMBER	SAMPLE DESCRIPTION	MEAS RATIO	CONCENTRATION	UNITS MEAS	INT STD
60A	02/26/87	F1	AG	91	71.0	1.1	1400	UGL	
			AS	71.0		1.4	1000	UGL	
			BA	71.0		1.10	0000	UGL	
			B82P	71.0		10	0000	UGL	S
			BE	71.0	1.1				
			BR	71.0	1.1	8300	UGL		
			B2F1P	71.0	1.1	244	0000	UGL	
			CD	71.0	1.1	10	0000	UGL	
			CL	71.0	1.1	11	9000	UGL	
			CPMS	71.0	1.1	49000	.0000	UGL	
			CPMSO	71.0	1.1	43	4000	UGL	
			CPMSO2	71.0	1.1	79	6000	UGL	
			CR	71.0	1.1	30	0000	UGL	
			CU	71.0	1.1	24	0000	UGL	
			F	71.0	1.1	21	3000	UGL	
			HMX	71.0	1.1	360	0000	UGL	
			NA	71.0	1.1	5	0700	UGL	
			NI	71.0	1.1	1800000	.0000	UGL	
			NIT	71.0	1.1	65	2000	UGL	
			PB	71.0	1.1	2210	0000	UGL	
			PHENOL	71.0	1.1	7	8000	UGL	
			PHENOL	71.0	1.1	870	0000	UGL	S
			PO4ORI	71.0	1.1	3	0000	UGL	
			RDX	71.0	1.1	57	0000	UGL	
			SB	71.0	1.1	4	1900	UGL	
			SE	71.0	1.1	7	0000	UGL	
			TDGCL	71.0	1.1	2	5300	UGL	
			TFTRYL	71.0	1.1	720	0000	UGL	
			Tl	71.0	1.1	4	3900	UGL	
			ZN	71.0	1.1	1	7000	UGL	
			130NB	71.0	1.1	60	0000	UGL	
			135NB	71.0	1.1	9	0800	UGL	
			240NT	71.0	1.1	5	8400	UGL	
			246NT	71.0	1.1	2	2200	UGL	
			260NT	71.0	1.1	6	2500	UGL	
			SO4	71.0	1.1	5	7000	UGL	
			DIMP	71.0	1.1	80000	0000	UGL	
						LT	23.3000	UGL	

INSTALLATION RESTORATION PROGRAM

TOOL IF AND (SOUTH AREA)

CGW ANALYTICAL RESULTS

SITE TYPE WELLS

SITE ID S 10

DESCRIPTION 7.7

SAMPLE PROG	SAMPLE DATE	LAR	NAME	METH NUMR	SAMPLE DEF. MTR	MEAS RODI	CONCENTRATION	UNITS MEAS	INT STD
G9A	02/27/87	F1	AG	99	66 .3	TT	4300	UGL	
			AS	66 .3			34 2000	UGL	
			BA	66 .3			200.0000	UGL	
			BB/P	66 .3			2 0000	UGL	\$
			BF	66 .3			1.7500	UGL	
			BR	66 .3	TT		244 0000	UGL	
			B7A/C	66 .3			5.0000	UGL	\$
			B2+4P	66 .3	TT		3 0000	UGL	\$
			CD	66 .3	TT		11.9000	UGL	
			CL	66 .3			23000 0000	UGL	
			CPMS	66 .3	TT		43 4000	UGL	
			CPMSO	66 .3	TT		79 6000	UGL	
			CPMSO2	66 .3	TT		30 8000	UGL	
			CR	66 .3			88 0000	UGL	
			CU	66 .3	TT		80 0000	UGL	
			CYN	66 .3	TT		29 5000	UGL	
			DIMP	66 .3	TT		23 3000	UGL	
			F	66 .3			600 0000	UGL	
			HMX	66 .3	TT		5.0700	UGL	
			NA	66 .3			28000 0000	UGL	
			NI	66 .3	TT		82 0000	UGL	
			NIT	66 .3			2000.0000	UGL	
			PR	66 .3			27.0000	UGL	
			PHENOL	66 .3	TT		870 0000	UGL	
			P040RT	66 .3	TT		56 9000	UGL	
			RDX	66 .3	TT		4 1900	UGL	
			SB	66 .3	TT		7 0000	UGL	
			SE	66 .3	TT		2 5300	UGL	
			TGCL	66 .3	TT		720 0000	UGL	
			TFTRYL	66 .3	TT		4 3900	UGL	
			TL	66 .3			4 7000	UGL	
			ZN	66 .3			270 0000	UGL	
			13DNB	66 .3	TT		9 0800	UGL	
			135TNB	66 .3	TT		5.8400	UGL	
			24DNT	E6 .3	TT		2 2200	UGL	
			2461NT	66 .3	TT		6 2500	UGL	
			26DNT	E6 .3	TT		5 7000	UGL	
			SO4	E6 .3			40000.0000	UGL	

RUN DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOLFILE AD (SOUTH AREA)

CGW ANALYTICAL GROUP INC.

SITE TYPE WELL

SITE ID S 12

DESCRIPTION ? . 1

PAGE NO 12

SAMPLE PROF	SAMPLE DATE	LAB	NAME	MEASURED NUMBER	SAMPLE NUMBER	MEAS BODY	CONCENTRATION	UNITS MEAS	INT SID
CDA	02/27/87	F1	AG	00	3.9		183.0000	UGL	
			AS	3.9	G1	200.0000	UGL		
			BA	3.9		3.0000	UGL		S
			BBZP	3.9		8.3000	UGL		
			BL	3.9	1.1		1250.0000	UGL	
			BR	3.9			11.9000	UGL	
			CD	3.9	1.1	3000000.0000	UGL		
			CL	3.9	1.1	4.34000	UGL		
			CPMS	3.9	1.1	79.6000	UGL		
			CPMS01	3.9	1.1	30.8000	UGL		
			CPMS02	3.9	1.1	10.8000	UGL		
			CR	3.9	1.1	24.0000	UGL		
			CU	3.9	1.1	29.5000	UGL		
			CYN	3.9	1.1	23.3000	UGL		
			DIMP	3.9	1.1	1200.0000	UGL		
			F	3.9	1.1	1600000.0000	UGL		
			HMX	3.9	1.1	~65.2000	UGL		
			NA	3.9	1.1	2852.0000	UGL		
			NI	3.9	1.1	2.7000	UGL		
			NIT	3.9	1.1	870.0000	UGL		
			PB	3.9	1.1	90.0000	UGL		
			PHENLC	3.9	1.1	4.1900	UGL		
			PO4ORT	3.9	1.1	7.0000	UGL		
			RDX	3.9	1.1	2.5300	UGL		
			SB	3.9	1.1	720.0000	UGL		
			SE	3.9	1.1		5.8400	UGL	
			TDGCL	3.9	1.1		4.3900	UGL	
			TETRYL	3.9	1.1		2.4000	UGL	
			TL	3.9	1.1		90.0000	UGL	
			ZN	3.9	1.1		9.0800	UGL	
			13DNBR	3.9	1.1		2.2200	UGL	
			135INB	3.9	1.1		6.2500	UGL	
			246NT	3.9	1.1		5.7000	UGL	
			266NT	3.9	1.1		1490000.0000	UGL	
			SO4	3.9	1.1				

POLLUTION DATE 24 AUG 88

INSTILLATION RESTORATION PROGRAM

1000 FT AD (SOUTH ARFA)

CGW ANALYTICAL RESULTS

SITE TYPE: WELL

SITE ID: S 14

DESCRIPTION: 7.7

PAGE NO 13

SAMPLE NUMBER	SAMPLE DATE	LAB	NAME	METH NUMBER	SAMPLE DEPTH (FT)	MEAS RONI	CONCENTRATION	UNITS MEAS	INT STD
100A	02/27/87	F1	AG	93	8.0		133.0(00)	UGL	
		AS		8.0			7.9000	UGL	
		BA		8.0			4.0000	UGL	5
		RB2F		8.0	11		8300	UGL	
		BF		8.0	11		244.0000	UGL	
		BR		8.0	11		180.0(00)0.0000	UGL	
		CD		8.0	11		43.4000	UGL	
		CL		8.0	11		79.6000	UGL	
		CPMS		8.0	11		30.8000	UGL	
		CPMSD		8.0	11		10.8000	UGL	
		CPMSD2		8.0	11		70.0000	UGL	
		CR		8.0	11		29.5000	UGL	
		CU		8.0	11		23.3000	UGL	
		CYN		8.0	11		500.0000	UGL	
		DIMP		8.0	11		5.0700	UGL	
		F		8.0	11		65.2000	UGL	
		HMX		8.0	11		640.0000	UGL	
		NI		8.0	11		2.9000	UGL	
		NIT		8.0	11		870.0000	UGL	
		PR		8.0	11		200.0000	UGL	
		PFENIC		8.0	11		4.1900	UGL	
		POORT		8.0	11		15.2000	UGL	
		RDX		8.0	11		2.5300	UGL	
		SB		8.0	11		720.0000	UGL	
		SE		8.0	11		4.3900	UGL	
		TOGCI		8.0	11		2.2200	UGL	
		TFIRYL		8.0	11		6.2500	UGL	
		TI		8.0	11		5.7000	UGL	
		ZN		8.0	11		1140000.0000	UGL	

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8/24/88

ORIGINAL RUNID- I R P R O J DATE 24 AUG 88 TIME- 13:38:98 COPIES REQUESTED- 001
US ARMY AMCCOM ABERDEEN PROVING GROUND- EDGEWOOD AREA SCIENTIFIC COMPUTER CENTER - - UNIVAC 1100/70 LEVEL 39R3D
* - * - * XEROX 9700 ELECTRONIC PRINTING SYSTEM * - *

RUN DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

TOEFL AND SOUTHERN AREA

CSO ANALYTICAL RECLM TS

SITE TYPE LAKE

SITE ID S 1 WOP

DESCRIPTION

SAMPLE PROG	SAMPLE DATE	LAB	NAME	MEAN NMK	AMPLITUDE (IF PRACTICAL)	MEAN ROOM	CONCENTRATION	UNITS MFAS	INT STO
GQA	02/20/87	FT	YMAX	9.9	1.7	1.1	9 2000	UGG	
			NR		1.7	1.1	9 2000	UGG	
			NIT		1.7	1.1	11 1000	UGG	
			RDX		1.7	1.1	6 6900	UGG	
			13DNB		1.7	1.1	8 300	UGG	
			135TNA		1.7	1.1	5 000	UGG	
			24DNT		1.7	1.1	3 4000	UGG	
			246JN		1.7	1.1	5 000	UGG	
			26DNT		1.7	1.1	.54(10)	UGG	

PAGE NO 1

RIN DATA 24 AUG 88

INSTALLATION RESTORATION PROGRAM
TOEFL AD (SOUTH ARFA)
CSO ANALYTICAL RESHLIS
SITE TYPE : LAGO
SITE ID : SWOP 1
DESCRIPTION

SAMPLE PROJECT	SAMPLE DATE	LAR	METH NAME	SAMPLE NUMBER	DEPTH(FT)	MEAS R001	CONCENTRATION	UNITS MEAS	INT STD
GDA	07/20/87	FT	HMX	97	2.3	11	9 2000	UGG	
			NR		2.3	11	9 2000	UGG	
			NIT		2.3	11	28.7000	UGG	
			RDX		2.3	11	6.6900	UGG	
			13DDNB		2.3	11	8300	UGG	
			135TNR		2.3	11	5000	UGG	
			240NI		2.3	11	3.4000	UGG	
			246TNT		2.3	11	.5000	UGG	
			260NI		2.3	11	.5400	UGG	

RUN DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

100516 AD (SOUTHERN AREA)

CSO ANALYTICAL RESULTS

SITE TYPE LABORATORY

SITE ID S WDP 2

DESCRIPTION

SAMPLE PROG	SAMPLE DATE	LAB	NAME	MATCH NMB	SAMPLE ID(FINER)	MEAS R001	CONCENTRATION	UNITS	INT MFAS	STD MFAS
GQA	02/20/87	FT	HMX	99	2 3	1 1	11.1000	UGG	9 2000	UGG
			NIT	NB	2 3	1 1	6 6900	UGG	9 2000	UGG
			RDX		2 3	1 1	8300	UGG	8300	UGG
			13DNR		2 3	1 1	5000	UGG	5000	UGG
			1351NR		2 3	1 1	3 4000	UGG	3 4000	UGG
			24DNT		2 3	1 1	5000	UGG	5000	UGG
			246INI		2 3	1 1	5400	UGG	5400	UGG
			26DNT		2 3	1 1				

PAGE NO 3

RUN DATE 24 AUG 88

INSTALLATION RESTORATION PROGRAM

TOOLE AD (SOUTH AREA)

CSO ANALYTICAL RESULTS

SITE TYPE : LAGO

SITE ID : S WOP 3

DESCRIPTION

SAMPLE PROG.	SAMPLE DATE	LAR	NAME	MFTH NUMR	SAMPLE DEPTH(FT)	MEAS RDL	CONCENTRATION	UNITS MEAS	INT STD
G0A	07/20/87	ET	IMX	99	2.3	11	9 2000	UGG	
			NR		2.3	11	9 2000	UGG	
			NIT		2.3	11	20.9000	UGG	
			RDX		2.3	11	6.6900	UGG	
			12DNR		2.3	11	8300	UGG	
			135TNR		2.3	11	5000	UGG	
			24DNJ		2.3	11	3 4000	UGG	
			246TNT		2.3	11	5000	UGG	
			26DNJ		2.3	11	5400	UGG	

PAGE NO: 4

RUN DATE 24 AUG 88

INSTALLATION RESIGNATURE PROGRAM

TOEEL AD (SOUTH AREA)

CSD ANALYTICAL RESULTS

SITE TYPE LAGO

SITE ID 5 WOP 4

SAMPLE PROG	SAMPLE DATE	LAB	NAME	MFTH NUMR	SAMPLE DEPTH(FT)	MEAS ROOL	CONCENTRATION	UNITS MEAS	UNITS STD
GOA	02/20/87	ET	HMX	99	2.3	LT	9.2000	UGG	UGG
			NB		2.3	LT	11.1000	UGG	UGG
			NIT		2.3	LT	6.6900	UGG	UGG
			RDX		2.3	LT	8.9000	UGG	UGG
			13DNB		2.3	LT	5.0000	UGG	UGG
			135TNB		2.3	LT	3.4000	UGG	UGG
			24DNT		2.3	LT	5.0000	UGG	UGG
			2461N1		2.3	LT	5.4000	UGG	UGG
			26DNT		2.3	LT			

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

ALPHABETIC SORT BY CODES:

AACHXE	ACETIC ACID, CYCLOHEXYL ESTER
ABHC	ALPHA-BENZENEHEXACHLORIDE / ALPHA-HEXACHLOROCYCLOHEXANE
AC	HYDROGEN CYANIDE / HYDROCYANIC ACID
ACDHMW	ACIDS (HIGH MOLECULAR WEIGHT)
ACET	ACETONE
ACHE	ANTICHOLINESTERASE
ACIDIT	ACIDITY
ACPHN	ACETOPHENONE
ACROLN	ACROLEIN
ACRYLO	ACRYLONITRILE
ADHP	AMMONIUM DIHYDROGEN PHOSPHATE
AENSF	ALPHA-ENDOSULFAN / ENDOSULFAN I
AG	SILVER
AL	ALUMINIUM
ALAL	ALIPHATIC ALCOHOL
ALDEHY	ALDEHYDES
ALDRN	ALDRIN
ALHC	ALIPHATIC HYDROCARBON
ALHMW	ALCOHOLS (HIGH MOLECULAR WEIGHT)
ALK	ALKALINITY
ALKBIC	ALKALINITY BICARBONATE
ALKCAR	ALKALINITY CARBONATE
ALKHYD	ALKALINITY HYDROXIDE
ALKN	ALKANE
ANAPNE	ACENAPHTHENE
ANAPYL	ACENAPHTHYLENE
ANELNT	ANION ELUENT
ANIL	ANILINE
ANTRC	ANTHRACENE
ANTRCN	9-ANTHRACENECARBONITRILE
ANTRQU	9,10-ANTHRACENEDIONE / ATHRAQUINONE
AS	ARSENIC
ASBEST	ASBESTOS
ASEXTE	ARSENIC EXTRACTABLE
ASTOT	ARSENIC TOTAL
ATNBA	2,4,6-TRINITROBENZALDEHYDE
ATNT	ALPHA-TRINITROTOLUENE (OBSOLETE; USE 246TNT)
ATZ	ATRAZINE
AYLETH	ALLYL ETHER
AZACN	AZACYLONONANE
B	BORON
BA	BARIUM
BAANTR	BENZO [A] ANTHRACENE
BAHXE	BUTANOIC ACID, 1-HEXYL ESTER
BAPYR	BENZO [A] PYRENE
BBFANT	BENZO [B] FLUORANTHENE
BBFLRE	BENZO [B] FLUORENE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

BBHC	BETA-BENZENEHEXACHLORIDE / BETA-HEXACHLOROCYCLOHEXANE
BBNTHP	BENZO [B] NAPHTHO[1,2-D] THIOPHENE
BBZP	BUTYLBENZYL PHTHALATE
BCHPD	BICYCLO [2,2,1] HEPTA-2,5-DIENE
BCLME	BIS(CHLOROMETHYL) ETHER
BCPHCE	2,2-BIS(CHLOROPHENYL)CHLOROETHYLENE DDT RELATED
BCY3HX	BICYCLO [3,1,0] HEXANE
BDADME	BUTANEDIOIC ACID, DIMETHYL ESTER
BE	BERYLLIUM
BEETO	1-(2-BUTOXYETHOXY)ETHANOL
BENSIF	BETA-ENDOSULFAN / ENDOSULFAN II
BENZA	BENZANTHRONE
BENZAL	BENZALDEHYDE
BENZID	BENZIDINE
BENZOA	BENZOIC ACID
BEP	2-BUTOXYETHANOL PHOSPHATE
BF2ANT	BENZOBIFLUORANTHENE
BGHIFA	BENZO [GHI] FLUROANTHENE
BGHIPY	BENZO [G,H,I] PERYLENE
BICYHX	BICYCLOHEXYL
BIDBI	1,5-BIS(1,1DIMETHYLETHYL)-3,3-DIMETHYLBICYCLO[3.1.0]-HEXANE-2-ONE
BiNAP	BINAPHYTHYL
BJFANT	BENZO [J] FLUORANTHENE
BKFANT	BENZO [K] FLUORANTHENE
BLDX	BLADEX
BMP	BUTYLMETHYL PHTHALATE
BOD	BIOLOGICAL OXYGEN DEMAND
BPBG	BUTYLPHthalyl BUTYGLYCOLATE
BRCLM	BROMOCHLOROMETHANE
BRDCLM	BROMODICHLOROMETHANE
BRMCIL	BROMACIL
BTA	BENZOTIAZOLE
BTMSOA	BIS(TRIMETHYLSILYL) OXALIC ACID
BUEETH	BUTYLETHYL ETHER
BZ	3-QUINUCLIDINYL BENZILATE
BZALC	BENZYL ALCOHOL
BZAL2M	ALPHA,ALPHADIMETHYLBENZENEMETHANOL
BZAPAN	BENZO [A] PHENANTHRENE
BZCPAN	BENZO [C] PHENANTHRENE
BZFANT	BENZFLUORANTHENE
BZHQN	BENZO [H] QUINOLINE
BZOAME	BENZOIC ACID, METHYL ESTER / METHYL BENZOATE
BZOTHP	BENZO [B] THIOPHENE
BZOTRZ	1H-BENZOTRIAZOLE / 1,2,3-BENZOTRIAZOLE
BZPA	BENZENEPHOSPHONIC ACID
BZYLBR	BENZYL BROMIDE / ALPHA-BROMOTOLUENE
B2CEXM	BIS(2-CHLOROETHOXY)METHANE
B2CIPE	BIS(2-CHLOROISOPROPYL) ETHER
B2CLEE	BIS(2-CHLOROETHYL) ETHER

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

B2EHP	BIS(2-ETHYLHEXYL) PHTHALATE
CA	CALCIUM
CACO3S	CALCIUM CARBONATE SOLUTION
CALLMW	HYDROCARBONS (ALL MOLECULAR WEIGHTS)
CAME	CARBAMIC ACID, METHYL ESTER
CAMP	CAMPHOR
CAPLCT	CAPROLACTAM / 6-AMINOHEXANOIC ACID LACTAM
CARBAZ	9H-CARBAZOLE
CBA	O-CHLOROBENZALDEHYDE
CBCCH	CIS-1-BROMO2-CHLOROCYCLOHEXANE
CBOA	O-CHLOROBENZOIC ACID
CCLF2	CHLORODIFLUOROMETHANE
CCLF3	TRIFLUOROCHLOROMETHANE
CCL2F2	DICHLORODIFLUOROMETHANE
CCL3F	TRICHLOROFUOROMETHANE
CCL4	CARBON TETRACHLORIDE
CC3	XXCC3
CD	CADMUM
CDACH	CIS-1,2-DIACETOXYCYCLOHEXANE
CDCL3	CHLOROFORM-D
CDNBIS	CHLORODINITROBENZENE ISOMER
CD2CL2	METHYLENE CHLORIDE-D2
CEC	CATION EXCHANGE CAPACITY
CG	PHOSGENE / CARBONYL CHLORIDE
CHBR3	BROMOFORM
CHCL3	CHLOROFORM
CHO	1,2-CYCLOHEXANE OXIDE
CHOLA	CHOLESTANF
CHONE	CYCLOHEXANONE
CHRY	CHRYSENE
CH2CL2	METHYLENE CHLORIDE
CH3BR	BROMOMETHANE
CH3CL	CHLOROMETHANE
CH3CN	ACETONITRILE
CR	CYANOGEN CHLORIDE
CL	CHLORIDE
CLCYTHX	CHLOROCYCLOHEXANE
CLC6D5	CHLOROBENZENE-D5
CLC6HS	CHLOROBENZENE
CLD	CHLORINE DEMAND
CLDAN	CHLORDANE
CLDEN	CHLORDENE
CLNAP	CHLORONAPHTHALENES
CL03	CHLORATE
CLP	CHLOROPHENOLS
CLVRA	2-CHLOROVINYL ARSONIC ACID
CLXB	CHLORINATED BENZENES
CLXNAP	CHLORINATED NAPHTHALENES
CL2	CHLORINE
CL2BP	DICHLOROBIPHENYLS

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

CL2BZ	DICHLOROBENZENES
CL2NAP	DICHLORONAPHTHALENES
CL3BP	TRICHLOROBIPHENYLS
CL3C3E	TRICHLOROPROPENES
CL3NAP	TRICHLORONAPHTHALENES
CL3P	TRICHLOROPHENOLS
CL4BP	TETRACHLOROBIPHENYLS
CL4NAP	TETRACHLORONAPHTHALENES
CL5B	PENTACHLOROBENZENE
CL5BP	PENTACHLOROBIPHENYLS
CL5ET	PENTACHLOROETHANE
CL6BP	HEXACHLOROBIPHENYLS
CL6BZ	HEXACHLOROBENZENE
CL6CP	HEXACHLOROCYCLOPENTADIENE
CL6ET	HEXACHLOROETHANE
CL7BP	HEPTACHLOROBIPHENYLS
CL7NB	HEPTACHLORONORBORNADIENES
CMONOX	CARBON MONOXIDE
CN	CHLOROACETOPHENONE
CO	COBALT
COD	CHEMICAL OXYGEN DEMAND
COND	SPECIFIC CONDUCTIVITY
COND-F	SPECIFIC CONDUCTIVITY AS TESTED IN FIELD (RM, SEMI-QUANT ONLY)
COUMRN	2,3-DIHYDROBENZOFURAN / COUMARAN
CO3	CARBONATE
CPCXAL	CYCLOPENTANECARBOXALDEHYDE
CPMS	P-CHLOROPHENYLMETHYL SULFIDE
CPMSO	P-CHLOROPHENYLMETHYL SULFOXIDE
CPMSO2	P-CHLOROPHENYLMETHYL SULFONE
CPO	CYCLOPENTANONE
CR	CHROMIUM
CRHEX	HEXAVALENT CHROMIUM
CR04	CHROMATE
CS	CESIUM
CSOL	CRESOLS
CS2	CARBON DISULFIDE
CU	COPPER
CUEXT	COPPER EXTRACTABLE
CUTOT	COPPER TOTAL
CX	PHOSGENE OXIME / DICHLOROFORMOXIME
CYDODC	CYCLODODECANE
CYHX	CYCLOHEXANE
CYHXB	CYCLOHEXYLBENZENE / PHENLYCYCLOHEXANE
CYN	CYANIDE
CYNF	CYANIDE, FREE FORM
CYOCTE	CYCLOOCTATETRAENE
CYPD	CYCLOPENTADIENE
CYPNE	CYCLOPENTENE
CIADME	CARBONIC ACID, DIMETHYL ESTER
C10	DECANE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

C11	HENDECANE
C12	DODECANE
C12AMM	8-METHYLDECANOIC ACID, METHYL ESTER
C12DCE	CIS-1,2-DICHLOROETHENE
C13	TRIDECAINE
C13DCP	CIS-1,3-DICHLOROPROPYLENE / CIS-1,3-DICHLOROPROPENE
C14	TETRADECANE
C14A	TETRADECANOIC ACID / MYRISTIC ACID
C14AME	TETRADECANOIC ACID, METHYL ESTER
C15	PENTADECANE
C15A	PENTADECANOIC ACID
C16	HEXADECANE
C16A	HEXADECANOIC ACID / PALMITIC ACID
C16ABE	HEXADECANOIC ACID, BUTYL ESTER
C16ADM	HEXADECANOIC ACID, DIMETHYL ESTER
C16AEH	HEXADECANOIC ACID, BIS(2-ETHYLHEXYL) ESTER
C16AME	HEXADECANOIC ACID, METHYL ESTER
C16SAT	SATURATED HYDROCARBONS (C16)
C17	HEPTADECANE
C17AM	HEPTADECANOIC ACID, METHYL ESTER
C18	OCTADECANE
C18ABE	OCTADECANOIC ACID, BUTYL ESTER
C18AE	OCTADECANOIC ACID, ETHYL ESTER
C18AME	OCTADECANOIC ACID, METHYL ESTER
C18AOD	OCTADECANOIC ACID, OCTADECYL ESTER
C18UNS	C18H300 UNKNOWN
C185FP	BIS(PENTAFLUOROPHENYL)PHENYL PHOSPHINE
C19	NONADECANE
C19A	NONADECANOIC ACID
C2AVE	ACETIC ACID, VINYL ESTER / VINYL ACETATE
C2H3CL	CHLOROETHENE / VINYL CHLORIDE
C2H5CL	CHLOROETHANE
C20	EICOSANE
C21	HENEICOSANE
C22UNS	C22H400 UNKNOWN
C25	PENTACOSANE
C3AME	PROPANOIC ACID, METHYL ESTER
C30AME	TRIACONTANOIC ACID, METHYL ESTER
C36	HEXATRIACONTANE
C4	BUTANE
C4HX1L	CIS-4-HEXEN-1-OL
C5A	PENTANOIC ACID / VALERIC ACID
C6D6	BENZENE-D6
C6ROH	CYCLOHEXANOL
C6H6	BENZENE
C7A	HEPTANOIC ACID
C7NB1	HEPTACHLORONORBORNENE
C8AME	OCTANOIC ACID, METHYL ESTER
C9	NONANE
DBAHA	DIBENZO [A,H] ANTHRACENE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

DBATTS	2,4-DIHYDROXYBENZOIC ACID, TRIS-TRIMETHYSILYL
DBCP	DIBROMOCHLOROPROPANE
DBHC	DELTA-BENZENEHEXACHLORIDE / DELTA-HEXACHLOROCYCLOHEXANE
DBRCLM	DIBROMOCHLOROMETHANE
DBTSPY	4,5-DIMETHYL-2,6-BIS(TRIMETHYLSILOXY)PYrimidine
DBZFUR	DIBENZOFURAN
DBZTHP	DIBENZOTHIOPHENE
DCAMBA	2-METHOXY-3,6-DICHLOROBENZOIC ACID
DCBPH	DICHLOROBENZOPHENONE
DCHP	DICYCLOHEXYL PHTHALATE
DCMBF	5,7-DICHLORO-2-METHYL BENZOFURAN
DCMPSX	DECAMETHYLCYCLOPENTASILOXANE
DCPD	DICYCLOPENTADIENE
DDVP	VAPONA
DEA	DIETEYLAMINE
DECYLB	DECYL BENZENE
DEDMP	DIETEYLDIMETHYL DIPHOSPHONATE
DEETH	DIETHYL ETHER
DEGLYC	2,2-OXYBISETHANOL / DIETHYLENE GLYCOL
DEP	DIETHYL PHTHALATE
DEPD4	DIETHYL PHTHALATE-D4
DHBZPY	3,4-DIHYDRO2H-1-BENZOPYRAN
DHDMAC	9,10-DIHYDRO-9,9-DIMETHYLACRIDINE
DIACAL	DIACETONE ALCOHOL / 4-HYDROXY-4-METHYL-2-PENTANONE
DIADS	BIS(DIISOPROPYLAMINOETHYL) DISULFIDE
DIAEL	DIISOPROPYLAMINOETHANOL
DIAEP	S-DIISOPROPYLAMINOETHYL METHYL PHOSPHONOTHIOATE
DIAET	DIISOPROPYLAMINOETHANETHIOL
DIAS	BIS(DIISOPROPYLAMINOETHYL) SULFIDE
DIAZ	DIAZINON
DIBP	DIISOBUTYL PHTHALATE
DICLP	DICHLOROPHENOLS
DIDDP	DIISOPROPYLDIMETHYL DIPHOSPHONATE
DIH2O	DEIONIZED WATER
DIMP	DIISOPROPYL Methyl PHOSPHONATE
DIOP	DIISOCTYL PHTHALATE
DIPUR	DIISOPROPYLUREA
DITH	DITHIANE
DLDRN	DIELDRIN
DL2HPG	DL-2-(3-HYDROXYPHENYL)GLYCINE
DM	ADAMSITE
DMA	DIMETHYLANILINE (OBSOLETE; USE NNDMA)
DMCAR	DIMETHYL DITHiocARBONATE
DMCPDE	1,2-DIMETHYLCYCLOPENTADIENE
DMDS	DIMETHYL DISULFIDE
DMETH	DIMETHYL ETHER
DMIP	DIMETHYL ISOPHTHALATE
DMP	DIMETHYL METHYL PHOSPHATE
DMPCHE	3-(2,2-DIMETHYLPROPOXY)CYCLOHEXENE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

DMPTHF	2,2-DIMETHYL-5-(1-METHYLPROPYL)TETRAHYDROFURAN
DMXDMs	DIMETHOXYDIMETHYLSILANE
DM1ACH	2,2-DIMETHYL-1-ACETYL CYCLOHEXANE
DNBEE	1,1-DI-N-BUTYLETHYLENE / 1,1-DI-N-BUTYLETHENE
DNBP	DI-N-BUTYL PHTHALATE
DNOP	DI-N-OCTYL PHTHALATE
DNOPD4	DI-N-OCTYL PHTHALATE-D4
DNPP	DI-N-PENTYL PHTHALATE
DNTISO	DINITROTOLUENE ISOMER
DO	DISSOLVED OXYGEN
DOAD	DIOCTYL ADIPATE
DOAZ	DIOCTYL AZELATE
DODECB	DODECYLBENZENE
DOETH	DIOCTYL ETHER
DOPAM	4-(2-AMINOETHYL)PYROCATECHOL / DOPAMINE
DPA	DIPHENYLAMINE
DPETH	DIPHENYL ETHER
DPETYN	1,1-(1,2-ETHYNEDIYL)BIS [BENZENE]
DPHNY	DIPHENYL
DPNTLL	D-(-)-PANTOLYL LACTONE
DPSO	DIPHENYL SULFOXIDE
DPSULF	1,1-THIOBIS [BENZENE] / DIPHENYLSULFIDE
DSEGIN	DISELENODIINDOLE
DTB4C	2,6-DI-TERTBUTYL-4-CRESOL
DTCHBO	1.ALPHA.(E),4.ALPHA.-1-(1,4-DIHYDROXY-2,6,6-TRIMETHYL-2-CYCLOHEXEN-1-YL)-2-BUTEN-1-ONE
DURS	DURSBAN
DYSCAN	GC-MS DYE SCAN
EBCPGL	ETHYL-2,2-BIS(4-CHLOROPHENYL) GLYCOLATE
ED	DICHLOROETHYL ARSINE
EDBDAS	3-PHENYLPROPANOYL
EICOSL	1-EICOSANOL
EMP	ETHYLMETHYL PHOSPHONATE
EMPA	ETHYLMETHYL PHOSPHONIC ACID
ENDRN	ENDRIN
ENDRNA	ENDRIN ALDEHYDE
ENHETH	ETHYL-N-HEXYL ETHER
ESFS04	ENDOSULFAN SULFATE
ETBD10	ETHYLBENZENE-D10
ETCYRX	ETHYLCYCLOHEXANE
ETC6H5	ETHYLBENZENE
ETOH	ETHANOL
F	FLUORIDE
FABPEE	FORMIC ACID, BETA-PHENYLETHYL ESTER
FACHAE	FORMIC ACID, CYCLOHEXYL ESTER
FANT	FLUORANTHENE
FARN	FARNESOL
FA1AL	FATTY ALCOHOL
FE	IRON
FLRENE	FLUORENE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

FREON	FREON / DICHLOROFLUOROMETHANE
F10BP	DECAFLUOROBIPHENYL
GA	TABUN / ETHYL-N,N-DIMETHYL PHOSPHORAMIDOCYANIDE
GB	SARIN / ISOPROPYL METHYL PHOSPHONOFLUORIDATE
GD	SOMAN / PINACOLYL METHYL PHOSPHONOFLUORIDATE
GRNDY	GREEN DYE
H	LEVINSTEIN MUSTARD
HARD	TOTAL HARDNESS
HCBD	HEXAChlorobutadiene
HCNB	HEXAChloronorbornadiene
HC03	BICARBONATE
HD	DISTILLED MUSTARD / BIS(2-CHLOROETHYL) SULFIDE
HEXANE	HEXANE
HG	MERCURY
HGEXT	MERCURY EXTRACTABLE
HGTOT	MERCURY TOTAL
HMTCHE	2,6,10,15,19,23-HEXAMETHYL-2,6,10,14,18,22-TETRACOSAHEXAENE
HMX	CYCLOTETRAMETHYLENETETRANITRAMINE
HN	NITROGEN MUSTARD
HPCL	HEPTACHLOR
HPCLE	HEPTACHLOR EPOXIDE
HPLH20	HPLC GRADE WATER
HPO4	HYDROLYZABLE PHOSPHATE
HWX013	HALOWAX 1013
HWX099	HALOWAX 1099
HXADBE	HEXANEDIOIC ACID, DIBUTYL ESTER / DIBUTYL ADIPATE
HXADOE	HEXANEDIOIC ACID, DIOCTYL ESTER
HXCCS	HEXACOSANE
HXXMA2	4,5,6,7,8,8A-HEXAhydro-8A-METHYL-2-[1H]-AZULENONE
HXMETA	1,3,5,7-TETRAAZATRICYCLO [3.3.13.7] DECANE / HEXAMETHYLENE TETRAMINE
HXMTSX	HEXAMETHYLCYCLOTRISILOXANE
HYDRND	1H-INDENE, OCTAHYDRO- / HYDRINDANE
HYDR2	HYDRAZINE
HYNB	7-HYDROXYNORBORNADIENE
H2S	HYDROGEN SULFIDE
H3PO4	PHOSPHORIC ACID
ICDPYR	INDENO [1,2,3-C,D] PYRENE
IMP	ISOPROPYL METHYL PHOSPHONATE
IMPA	ISOPROPYL METHYL PHOSPHONIC ACID
INDAN	1-HYDROXY-2,3-METHYLENE INDAN [M.W.146]
ISODR	ISODRIN
ISOPBZ	ISOPROPYL BENZENE / CUMENE
ISOPHR	ISOPHORONE
ISOQUN	ISOQUINOLINE
I4HXDE	1,4 - HEXADIENE
K	POTASSIUM
KEND	KETOENDRIN
L	LEWISITE
LACYBB	LACTIC ACID CYCLIC BUTANEBORONATE
LAURIC	LAURIC ACID

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

LIN	LINDANE / GAMMA-BENZENEHEXACHLORIDE / GAMMA-HEXACHLOROCYCLOHEXANE
LIPID	= LIPIDS
LO	LEWISITE OXIDE
HALO	MALONONITRILE
MBADOE	3-METHYLBUTANOIC ACID, 3,7-DIMETHYL-2,4,6-OCTATRIENYL ESTER
MBAS	FOAMING AGENTS / METHYALYNE BLUE ACTIVE SUBSTANCE
MBOH	ALPHA-METHYLBENZYL ALCOHOL
MBZA	ALPHA-METHYLBENZYL ACETOACETATE
MBZCAC	5-METHYLBENZO [C] ACRIDINE
MBZCL	ALPHA-METHYLBENZYL-2-CHLOROACETOACETATE
MDC1	2-METHYLUNDECANAL / 2-METHYLHENDECANAL
MEBPIP	1,1'-METHYLENEDIS [PIPERIDINE]
MECC6	METHYLCYCLOHEXANE
MECYBU	METHYLCYCLOBUTANE
MECYDC	METHYLCYCLODECANE
MECYPE	METHYLCYCLOPENTANE
MEC6D8	TOLUENE-D8
MEC6H5	TOLUENE
MEHG	METHYL MERCURY
MEK	METHYLETHYL KETONE
MEOH	METHANOL
MEPOH	2-METHYLPENTANOL
MESTOX	MESITYL OXIDE / 4-METHYL-3-PENTEN-2-ONE
METLAP	METHYLNAPHTHALENES
MEXCLR	METHOXYCHLOR
ME2C11	DIMETHYLUNDECANES
ME2HPL	METHYL-2-HEPTANOLS
ME2HPO	METHYL-2-HEPTANONES
ME2NAP	DIMETHYLNAPHTHALENES
ME3C6	TRIMETHEXANES
ME3C10	TRIMETHYLDECANES
ME3C11	TRIMETHYLUNDECANES
ME3NAP	TRIMETHYLNAPHTHALENES
MG	MAGNESIUM
MHYDRZ	METHYLHYDRAZINE
MIBK	METHYLISOBUTYL KETONE
MIPK	METHYLISOPROPYL KETONE
MIREX	MIREX
MLTHN	MALATHION
MN	MANGANESE
MNBK	METHYL-N-BUTYL KETONE / 2-HEXANONE
MO	MOLYBDENUM
MP	METHYLPHENOLS
MPA	METHYLPHOSPHONIC ACID
MPDDD	2-(META-CHLOROPHENYL)-2-(PARA-CHLOROPHENYL)-1,1-DICHLOROETHANE
MPK	METHYLPROPYL KETONE / 2-PENTANONE
MQFH2O	MILLI-Q-FILTERED WATER
MSSCAN	GC-MS ORGANIC SCAN
MTRZL	METRAZOL / CARDIAZOLE
NA	SODIUM

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

NAOHME	50% 1M NAOH/50% METHANOL
NAP	NAPHTHALENE
NAPD8	NAPHTHALENEDS
NB	NITROBENZENE
NBD5	NITROBENZENE-D5
NBMNSA	N-BUTYL-4-METHYLBENZENESULFONAMIDE
NBUETH	1,1'-OXYBIS [BUTANE] / BUTYL ETHER
NC	NITROCELLULOSE
NCLN	NORTRICYCLANOL
NCPPPA	N-(4-CHLOROPHENYL)-3-PHENYL-2-PROPENAMIDE
NC1	NITROCELLULOSE 12% N
NC2	NITROCELLULOSE 13.4% N
NDHXA	N-NITRODIHEXYLAMINE
NDIOX	NITROGEN DIOXIDE
NDMBSA	N,4-DIMETHYLBENZENESULFONAMIDE
NDNPA	NITROSODI-NPROPYLAMINE
NECHXA	N-ETHYLCYCLOHEXYLAMINE
NE2PEA	N-ETHYL-2-PROPENAMIDE
NG	NITROGLYCERINE
NHEDCA	N-(2-HYDROXYETHYL)-DECANAMIDE
NH3	AMMONIA
NH3N2	AMMONIA NITROGEN
NI	NICKEL
NIT	NITRITE,NITRATE-NON SPECIFIC
NITARO	NITROAROMATICS
NMANIL	N-METHYLANILINE
NMCANE	N-METHYLCARBAMIC ACID, 1-NAPHTHYL ESTER
NMNNSOA	N-METHYL-N-NITROSOANILINE
NNDMA	N,N-DIMETHYLANILINE
NNDMEA	N-NITROSODIMETHYLAMINE
NNDNPA	N-NITROSODIN-PROPYLAMINE
NNDPA	N-NITROSODIPHENYLAMINE
NNPIPA	N-NITROSOPIPERYLISOPENTYLAMINE
NN4HPL	N-NITROSO-4HYDROXYPROLINE
NO2	NITRITE
NO3	NITRATE
N2KJEL	NITROGEN BY KJELDAHL METHOD
OCADME	OCTANEDIOIC ACID, DIMETHYL ESTER
ODAPDM	OCTADECANOIC ACID, (2-PHENYL-1,3-DIOXOLAN-4-YL)METHYL ESTER
ODECA	OCTADECANOIC ACID / STEARIC ACID
ODMNSX	OCTADECAMETHYLCYCLONONASILOXANE
OEMP	O-ETHYLMETHYL PHOSPHONATE
OILGR	OIL & GREASE
OMCTSX	OCTAMETHYLCYCLOTETRASILOXANE
OPDDD	2-(ORTHO-CHLOROPHENYL)-2-(PARA-CHLOROPHENYL)-1,1-DICHLOROETHANE
OPDDE	2-(ORTHO-CHLOROPHENYL)-2-(PARA-CHLOROPHENYL)-1,1-DICHLOROETHENE
OPDDT	2-(ORTHO-CHLOROPHENYL)-2-(PARA-CHLOROPHENYL)-1,1,1-TRICHLOROETHANE
OP04	ORGANOPHOSPHATES
OXAT	1,4-OXATHIANE
OXCN	OXACYCLONONANE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

OZONE	OZONE
PAD4NE	PHOSPHORIC ACID, DIETHYL-4-NITROPHENYL ESTER
PAH	POLYNUCLEAR AROMATIC HYDROCARBON
PAODPE	PHOSPHORIC ACID, OCTYLDIPHENYL ESTER
PARTIC	PARTICULATE MATTER
PATBUE	PROPANOIC ACID, T-BUTYL ESTER
PATPE	PHOSPHORIC ACID, TRIPHENYL ESTER
PA2HDE	PROPANOIC ACID, 2-HYDROXYDECYL ESTER
PA2MBE	PENTANOIC ACID, 2-METHYLBUTYL ESTER
PB	LEAD
PBSTY	LEAD STYPHNATE
PCB016	PCB 1016
PCB221	PCB 1221
PCB232	PCB 1232
PCB242	PCB 1242
PCB248	PCB 1248
PCB254	PCB 1254
PCB260	PCB 1260
PCB262	PCB 1262
PCP	PENTACHLOROPHENOL
PCYMEN	4-(1-METHYLETHYL)TOLUENE / P-CYMENE
PD	DICHLOROPHENYL ARSINE
PDMSLX	POLYDIMETHYL SILOXANE / DIMETHYLPOLY SILOXANE
PEGE	POLYETHYLENEGLYCOL ETHERS
PENAMD	N-PENTAMIDE
PENTAN	PENTANE
PETN	PENTAERYTHRITOL TETRANITRATE
PFP	PENTAFLUOROPHENOL
PH	PH
PHANTR	PHENANTHRENE
PHENAA	PHENYLACETIC ACID
PHEND6	PHENOL-D6
PHENLC	PHENOLICS (NON-SPECIFIC)
PHENOL	PHENOL
PHTHA	1,2-BENZENEDICARBOXYLIC ACID / PHTHALIC ACID
PHTRL	PHTHALATES
PHXAA	PHENOXYACETIC ACID
PHYCP	1,2,3,4,5-PENTAHYDROXYCYCLOPENTANE
PH-F	PH AS TESTED IN THE FIELD (RM, SEMI-QUANT ONLY)
PIPER	PIPERIDINE
POX	PURGEABLE ORGANIC HALOGEN
PO4	PHOSPHATE
PO4ORT	ORTHOPHOSPHATE
PPDDO	2,2-BIS(PARA-CHLOROPHENYL)-1,1-DICHLOROETHANE
PPDDE	2,2-BIS(PARA-CHLOROPHENYL)-1,1-DICHLOROETHENE
PPDDT	2,2-BIS(PARA-CHLOROPHENYL)-1,1,1-TRICHLOROETHANE
PPTDE	2,2-BIS(PARA-CHLOROPHENYL)-2-PHENYL-1,1-DICHLOROETHENE
PRTHN	PARATHION
PYR	PYRENE
PYRD10	PYRENE-D10

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

P4	PHOSPHORUS
RDX	CYCLONITE / HEXAHYDRO-1,3,5-TRINITRO-1,3,4-TRIAZINE
REDDY	RED DYE
RESACI	RESIN ACIDS
S	SULFUR
SB	ANTIMONY
SCN	THIOCYANATE
SE	SELENIUM
SIL	SILICONE
SILVEX	SILVEX
SN	TIN
SO3	SULFITE
SO4	SULFATE
SPIRO	(1',5 TRANS)-7-CHLORO-6-HYDROXY-2',4-DIMETHOXY-6'-METHYL-SPIRO [BENZOFURAN-2-(3H)-1'-(2)-CYCLOHEXENE]-3,4'-DIONE
SQUAL	SQUALENE
SR	STRONTIUM
STERO	STEROIDS
STIGMA	STIGMASTEROL
STYPH	STYPHNATE ION
STYPHA	STYPHNIC ACID
STYR	STYRENE
SUADME	SULFURIC ACID, DIMETHYL ESTER
SULFID	SULFIDE
SUPONA	SUPONA / 2-CHLORO-1-(2,4-DICHLOROPHENYL)VINYLDIETHYL PHOSPHATE
S2CL2	SULFUR MONOCHLORIDE
TBA	TRIBUTYLAMINE
TBASDE	THIOBUTYRIC ACID, S-DECYL ESTER
TBP	TRIBUTYL PHOSPHATE
TCB	TETRACHLOROBENZENES
TCB1	1,2,4,5-TETRACHLOROBENZENE
TCB2	1,2,3,4-TETRACHLOROBENZENE
TCB3	1,2,3,5-TETRACHLOROBENZENE
TCDD	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN / DIOXIN
TCHDCS	TRANS-1,2-CYCLOHEXANDIOL, CYCLIC SULFITE
TCLEA	1,1,2,2-TETRACHLOROETHANE
TCLEE	TETRACHLOROETHYLENE / TETRACHLOROETHENE
TCLTFE	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE
TCOS	TETRACOSANE
TCSAME	15-TETRACOSENOIC ACID, METHYL ESTER
TCST	TRICHLOROSTYRENE
TDGCL	THIODIGLYCOL
TDMHSX	TETRADECAMETHYL HEXASILOXANE
TDODTL	TERT-DODECANETHIOL
TDS	TOTAL DISSOLVED SOLIDS
TEGLME	TRIETHYLENE GLYCOL, METHYL ETHER
TEGLYC	2,2'-[1,2-ETHANEDIYL BIS(OXY)]BIS [ETHANOL] / TRIETHYLENE GLYCOL
TEMP	TEMPERATURE
TEMP-F	TEMPERATURE AS TESTED IN THE FIELD (RM, SEMI-QUANT ONLY)
TEPO4	TRIETHYL PHOSPHATE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

TETPT	TETRACHLOROCYCLOPENTENE
TETR	TETRAZENE
TETRYL	NITRAMINE / N-METHYL-N,2,4,6-TETRANITROANILINE / TETRYL
TFAAPE	TRIFLUOROACETIC ACID, 1,5-PENTANEDIYL ESTER
TFDCLE	1,1,2-TRIFLUORO-1,2-DICHLOROETHANE
TGLYME	TETRAGLYME
THF	TETRAHYDROFURAN
THP2ML	TETRAHYDROPYRANYL-2-METHANOL
TL	THALLIUM
TMHPDO	3,3,6-TRIMETHYL-1,5-HEPTADIEN-4-ONE
TMHXL	3,5,5-TRIMETHYL-1-HEXANOL
TMODEO	2,2,7,7-TETRAMETHYL-4,5-OCTADIEN-3-ONE
TMPHAN	TETRAMETHYLPHENANTHRENE
TMPO3	TRIMETHYL PHOSPHITE
TMPO4	TRIMETHYL PHOSPHATE
TMTCON	3,5,24-TRIMETHYLTETRACONTANE
TMUR	TETRAMETHYLUREA
TM3PL	2,3,4-TRIMETHYL-3-PENTANOL
TNBISO	TRINITROBENZENE ISOMER
TNTISO	TRINITROTOLUENE ISOMER
TOC	TOTAL ORGANIC CARBON
TOTDDT	TOTAL VALUE OF ALL DDT, DDE, DDD ISOMERS
TOTGAF	TOTAL GRAVIMETRIC, ACID FRACTION
TOTHG2	TOTAL MERCURY
TOTPCB	TOTAL PCB
TOX	TOTAL ORGANIC HALOGENS
TPH	THIOPHENE
TP04	TOTAL PHOSPHATES
TRCLE	TRICHLOROETHYLENE / TRICHLOROETHENE
TRIBZ	TRICHLOROBENZENES
TRIMBZ	TRIMETHYLBENZENES
TRIPT	TRICHLOROCYCLOPENTENE
TRMTDE	2,3,4-TRIMETHYL-4-TETRADECENE
TRPHEN	TRIPHENYLENE
TRAMET	TRIHALOMETHANES
TS	TOTAL SULFUR
TSAHPE	P-TOLUENESULFONIC ACID, HEPTYL ESTER
TSS	TOTAL SUSPENDED SOLIDS
TVS	TOTAL VOLATILE SOLIDS
TXPHEN	TOXAPHENE
T1B2BC	TRANS-1-BROMO-2-BUTYLCYCLOPROPANE
T12DCE	TRANS-1,2-DICHLOROETHENE / TRANS-1,2-DICHLOROETHYLENE
T13DCP	TRANS-1,3-DICHLOROPROPENE
T2DEC	TRANS-2-DECENE
UDMH	UNSYMMETRICAL DIMETHYL HYDRAZINE
UNKXXX	UNKNOWN COMPOUND 001 THRU 999. NOTE: 001-999 FULL FIELD AS SHOWN
V	VANADIUM
VARHY	VARIOUS HYDROCARBONS WITH INCREASING M.W.
VFA	VINYL FORMATE
VM	O-ETHYL-S-(2-DIETHYLAMINOETHYL)METHYL PHOSPHONOTHIOATE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

VX	O-ETHYL-S-(2-DIISOPROPYLAMINOETHYL)METHYL PHOSPHONOTHIOATE
WP	WHITE PHOSPHORUS
XPLOSV	EXPLOSIVE SPRAY
XYLEN	XYLEMES
YELDY	YELLOW DYE
ZN	ZINC
ZR	ZIRCONIUM
01NHCL	0.1 N HYDROCHLORIC ACID
1A3MPZ	1-ACETYL-3-METHYL-5-PYRAZOLONE
1BY4HB	1-BENZYL-4-HYDROXYBENZIMIDAZOLE
1CDMPZ	1-CARBAZOYL3,5-DIMETHYL-2-PYRAZOLINE
1CLODC	1-CHLOROOCTADECANE
1C4L	1-BUTANOL
1DODCL	1-DODECANOL
1EHB	1-ETHYLHEXYLBENZENE
1EPB	1-ETHYLPROPYLBENZENE
1E2MB	1-ETHYL-2-METHYLBENZENE
1E24DB	1-ETHYL-2,4DIMETHYLBENZENE
1FNAP	1-FLUORONAPHTHALENE
1HPDOL	1-HEPTADECANOL
1HXE	1-HEXENE
1HX3OL	1-HEXEN-3-OL
1MBAAN	1-METHYLBENZ(A)ANTHRACENE
1MCPNE	1-METHYLCYCLOPENTENE
1MDB	1-METHYLDECYLBENZENE
1MECHX	1-METHYLETHYLCYCLOHEXANE
1MEIND	1-METHYLINDAN
1MFLRE	1-METHYL-9HFLUORENE
1MNAP	1-METHYLNAPHTHALENE
1MN8	1-METHYLNONYLBENZENE
1MPYR	1-METHYL PYRENE
1MX1PE	1-METHOXY-1PROPENE
1M2PEC	1-METHYL-2-(2-PROPYNYL)CYCLOPENTANE
1M7MEN	1-METHYL-7-(1-METHYLETHYL)NAPHTHALENE
1NHPI	1-NITROHEPTANE
1NKCL	1.ON KCL SOLUTION
1N2ONE	1-NITRO-2-OCTANONE
1OCTOL	1-OCTANOL
1PECHX	1-PROPYNYLCYCLOHEXANE
1PNAP	1-PHENYLNAPHTHALENE
1TBCHA	1-T-BUTYLCYCLOHEXANECARBOXYLIC ACID
10MEOH	10% METHANOL
10MUDM	10-METHYLUNDECANOIC ACID, METHYL ESTER
100EME	10-OCTADECENOIC ACID, METHYL ESTER
11DCE	1,1-DICHLOROETHYLENE / 1,1-DICHLOROETHENE
11DCLE	1,1-DICHLOROETHANE
111TCE	1,1,1-TRICHLOROETHANE
112TCE	1,1,2-TRICHLOROETHANE
113MCH	1,1,3-TRIMETHYLCYCLOHEXANE
12DBD4	1,2-DICHLOROBENZENE-D4

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

12DCD4	1,2-DICHLOROETHANE-D4
12DCLB	1,2-DICHLOROBENZENE
12DCLE	1,2-DICHLOROETHANE
12DCLP	1,2-DICHLOROPROPANE
12DMB	1,2-DIMETHYLBENZENE / O-XYLENE
12DNAP	1,2-DIMETHYLNAPHTHALENE
12DPB	1,2-DIPHENYLBENZENE
12DPH	1,2-DIPHENYLHYDRAZINE
12EPCH	CYCLOHEXENE OXIDE / 1,2-EPOXYCYCLOHEXENE
12EPEB	1,2-EPOXYETHYLBENZENE / STYRENE OXIDE
12MTDM	12-METHYLtetradecanoic Acid, Methyl ESTER
12TMCP	1,1,2,2-TETRAMETHYLCYCLOPROPANE
123CPR	1,2,3-TRICHLOROPROPANE
123MCH	1,2,3-TRIMETHYLCYCLOHEXANE
123TCB	1,2,3-TRICHLOROBENZENE
1234MB	1,2,3,4-TETRAMETHYLBENZENE
124MCH	1,2,4-TRIMETHYLCYCLOHEXANE
124TCB	1,2,4-TRICHLOROBENZENE
13CPDO	1,3-CYCLOPENTADIONE
13DBD4	1,3-DICHLOROBENZENE-D4
13DCLB	1,3-DICHLOROBENZENE
13DCPE	1,3-DICHLOROPROPENE
13DEB	1,3-DIETHYLBENZENE
13DFB	1,3-DIFLUOROBENZENE
13DMB	1,3-DIMETHYLBENZENE / M-XYLENE
13DMBB	(1,3-DIMETHYLBUTYL)BENZENE
13DMCH	1,3-DIMETHYLCYCLOHEXANE
13DNAP	1,3-DIMETHYLNAPHTHALENE
13DNB	1,3-DINITROBENZENE
13DPPR	1,1'-(1,3-PROPANEDIYL)BIS [BENZENE] / 1,3-DIPHENYLPROPANE
13TDAM	13-TETRADECYNOIC ACID, Methyl ESTER
135MCH	1,3,5-TRIMETHYLCYCLOHEXANE
135TMB	1,3,5-TRIMETHYLBENZENE
135TNB	1,3,5-TRINITROBENZENE
14DCBU	1,4-DICHLOROBUTANE
14DCLB	1,4-DICHLOROBENZENE
14DFB	1,4-DIFLUOROBENZENE
14DIOX	1,4-DIOXANE
14DMCH	1,4-DIMETHYLCYCLOEXANE
14DMNP	1,4-DIHYDRO1,4-METHANONAPHTHALENE
14DMXA	1,4-DIMETHOXANTHACENE
14DNB	1,4-DINITROBENZENE
14D2EB	1,4-DIMETHYL-2-ETHYLBENZENE
14MPME	14-METHYLpentadecanoic Acid, Methyl ESTER
15DNAP	1,5-DIMETHYLNAPHTHALENE
15MHME	15-METHYLhexadecanoic Acid, Methyl ESTER
16DMIN	1,6-DIMETHYLINDAN
16DNAP	1,6-DIMETHYLNAPHTHALENE
16MHME	16-METHYLheptadecanoic Acid, Methyl ESTER
167TMN	1,6,7-TRIMETHYLNAPHTHALENE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

17PTCE	17-PENTATRIACONTENE
18DNAP	1,8-DIMETHYLNAPHTHALENE
18018D	1,2,3,4,4A,5,8,8A-OCTAHYDRO-1,4,5,8-DIMETHANOLNAPHTHALEN-2-OL
2A46DA	2-AMINO-4,6DINITROANILINE
2A46DT	2-AMINO-4,6DINITROTOLUENE
2BEETO	2-(2-N-BUTOXYETHOXY)ETHANOL
2BEMDE	2,2-BIS(ETHYLMERCAPTO)DIETHYL ETHER
2BMMPR	2,2-BIS(METHYLMERCAPTO)PROPANE
2BNMNM	2-BUTYL-N-METHYLNORLEUCINE, METHYL ESTER
2BRHXA	2-BROMOHEXANOIC ACID
2BUXEL	2-BUTOXYETHANOL
2B1CP	2-BROMO-1-CHLOROPROPANE
2B1OOL	2-BUTYL-1-OCTANOL
2B4MFU	2-(T-BUTYL)4-METHYLFURAN
2CBMN	0-CHLOROBENZYLIDINEMALONONITRILE
2CECHO	2-(2-CYANOETHYL)CYCLOHEXANONE
2CHAEE	2-CYCLOPENTENE-1-HENDECANOIC ACID, ETHYL ESTER
2CHE1L	2-CYCLOHEXEN-1-OL
2CHE10	2-CYCLOHEXEN-1-ONE
2CLBP	2-CHLOROBIPHENYL
2CLEVE	(2-CHLOROETHOXY)ETHENE / 2-CHLOROETHYLVINYL ETHER
2CLP	2-CHLOROPHENOL
2CLPD4	2-CHLOROPHENOL-D4
2CMCHO	2-(CYANOMETHYL)CYCLOHEXANONE
2CNAP	2-CHLORONAPHTHALENE
2C4E	E-BUTENE
2C6MPZ	2-CHLORO-6-METHOXY-10H-PHENOTHIAZINE
2DMPEN	2,2-DIMETHYL PENTANE
2ECYBL	2-ETHYLCYCLOBUTANOL
2EP	2-ETHYLPHENOL
2E1HXL	2-ETHYL-1-HEXANOL
2E2HPD	2-ETHYL-2-HYDROXYMETHYL-1,3-PROPANEDIOL
2E4MPL	2-ETHYL-4-METHYL-1-PENTANOL
2FBP	2-FLUOROBIPHENYL
2FNAP	2-FLUORONAPHTHALENE
2FP	2-FLUOROPHENOL
2HBDDM	2-HYDROXYBUTANEDIOIC ACID, DIMETHYL ESTER
2HBNZL	2-HYDROXYBENZALDEHYDE / SALICYLALDEHYDE
2HNDOL	2-HENDECANOL / 2-UNDECANOL
2HYBP	2-HYDROXYBIPHENYL
2MBZA	2-METHYLBENZYL ALCOHOL
2MCPNE	2-METHYLCYCLOPENTANONE
2MCYPL	2-METHYLCYCLOPENTANOL
2MC3	2-METHYLPROPANE / ISOBUTANE
2MC4	2-METHYL BUTANE/ISOPENTANE
2MC7	2-METHYLHEPTANE / ISO OCTANE
2MD&C	2-METHYLDECANE
2MDOD	2-METHYLDODECANE
2MENAP	2-(1-METHYLETHYL)NAPHTHALENE
2MEPEN	2-METHYLPENTANE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

2MMECO	2-METHYL-5-(1-METHYLETHYL)-2-CYCLOHEXEN-1-ONE
2MNAP	2-METHYLNAPHTHALENE
2MP	2-METHYL PHENOL / 2-CRESOL
2MPAHT	2-METHYLPROPANOIC ACID, 3-HYDROXY-2,4,4-TRIMETHYLPENTYL ESTER
2MPAME	2-METHYLPROPANOIC ACID, METHYL ESTER
2MPA1E	2-METHYLPROPANOIC ACID, 1-(1,1-DIMETHYLETHYL)-2-METHYL-1,3-PROPANEDIYL ESTER
2MPEAE	2-METHYL-2-PROPENOIC ACID, 1,2-ETHANEDIYLESTER
2MPYR	2-METHYL PYRENE
2MTETD	2-METHYL TETRADECANE
2MTHF	2-METHYL TETRAHYDROFURAN
2MTHPM	2-METHYLTHIO-4-HYDROXYPYRIMIDINE
2MXEXL	2-(2-METHOXYETHOXY)ETHANOL / DIETHYLENEMEGLYCOL MONOMETHYLETER
2MMMC3	2-METHOXY-2METHYLPROPANE / TERT-BUTYLMETHYL ETHER
2MXTMB	2-METHOXY-2,3,3-TRIMETHYLBUTANE
2M1PE	2-METHOXY-1-PROPENE
2M1DDL	2-METHYL-1-DODECANOL
2M1PNE	2-METHYL-1-PENTENE
2M2BDA	2-METHYL-2-BUTENEDIAMIDE
2M2C3L	2-METHYL-2-PROPANOL / TERT-BUTANOL
2M2H3B	2-METHYL-2-HYDROXY-3-BUTYNE
2M24P	2-METHYL-2,4-PENTANEDIOL
2M3HXE	2-METHYL-3-HEXENE
2M3PNO	2-METHYL-3-PENTANONE
2NB2LZ	2-NITROBENZALAZINE
2NKCL	2N POTASSIUM CHLORIDE SOLUTION
2NNDPA	2-NITRO-N-NITROSODIPHENYLAMINE
2NODCO	2-NONADECANONE
2NP	2-NITROPHENOL
2NT	2-NITROTOLUENE
2N3C	3-METHYL-2-NITROPHENOL / 2-NITRO-M-CRESOL
20XBEL	2,2-OXY-BIS [ETHANOL]
2PETOH	2-PHENYLETHANOL
2PHXEL	2-PHOXYETHANOL
2PNAP	2-PHENYLNAPHTHALENE
2PROL	2-PROPANOL
2PXEXL	2-(2-PHOXYETHOXY)ETHANOL
2TCLEA	1,1,1,2-TETRACHLOROETHANE
2TMHPD	2,6,10,14-TETRAMETHYLHEPTADECANE
2TMD	2,6,10,14-TETRAMETHYLPENTADECANE
210DMU	2,10-DIMETHYLUDECANE
225TCB	2,2',5-TRICHLOROBIPHENYL
2255CB	2,2',5,5'-TETRACHLOROBIPHENYL
226TMO	2,2,6-TRIMETHYLOCTANE
23DCLP	2,3-DICHLOROPHENOL
23DMP	2,3-DIMETHYLPHENOL
23DNAP	2,3-DIMETHYLNAPHTHALENE
23D2HL	2,3-DIMETHYL-2-HEXANOL
23TMP	2,2,3,3-TETRAMETHYLPENTANE
2345CB	2,3,4,5-TETRACHLOROBIPHENYL

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

2346CP	2,3,4,6-TETRACHLOROPHENOL
235TMD	2,3,5-TRIMETHYLDECANE
2356CP	2,3,5,6-TETRACHLOROPHENOL
236TMN	2,3,6-TRIMETHYLNAPHTHALENE
237TMO	2,3,7-TRIMETHYLOCTANE
24D	2,4-DICHLOROPHOXYACETIC ACID
24DCB	2,4'-DICHLOROBIPHENYL
24DCLP	2,4-DICHLOROPHENOL
24DMD	2,4-DIMETHYLDECANE
24DMHX	2,4-DIMETHYLHEXANE
24DMPN	2,4-DIMETHYLPHENOL
24DNP	2,4-DINITROPHENOL
24DNT	2,4-DINITROTOLUENE
24M2PL	2,4-DIMETHYL-2-PENTANOL
24NPD3	2,4-DINITROPHENOL-D3
24T!3P	2,2,4-TRIMETHYL-1,3-PENTANEDIOL
245PCB	2,2'4,5,5'-PENTACHLOROBIPHENYL
245T	2,4,5-TRICHLOROPHOXYACETIC ACID
245TCP	2,4,5-TRICHLOROPHENOL
246MPY	2,4,6-METHYL PYRIDINE
246TCA	2,4,6-TRICHLOROANILINE
246TCP	2,4,6-TRICHLOROPHENOL
246TMO	2,4,6-TRIMETHYLOCTANE
246TNP	2,4,6-TRINITROPHENOL / PICRIC ACID
246TNR	2,4,6-TRINITRORESORCINOL / STYPHNIC ACID
246TNT	2,4,6-TRINITROTOLUENE
247HOI	2,2,4,4,7,7HEXAMETHYLOCTAHYDRO-1H-INDENE
247TMO	2,4,7-TRIMETHYLOCTANE
25C14D	2,5-CYCLOHEXADIEN-1,4-DIONE
25DCLP	2,5-DICHLOROPHENOL
25DMP	2,5-DIMETHYLPHENOL
25DMPA	2,5-DIMETHYLPHENANTHRENE
25DTHF	2,5-DIMETHYLtetrahydrofuran
25HPCB	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL
25HXC _B	2,2',3,4,5,5'-HEXACHLOROBIPHENYL
25OCCB	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL
256TMD	2,5,6-TRIMETHYLDECANE
26DBMF	2,6-DI-T-BUTYL-4-METHYLPHENOL
26DCLP	2,6-DICHLOROPHENOL
26DMO	2,6-DIMETHYLOCTANE
26DMP	2,6-DIMETHYLPHENOL
26DMST	2,6-DIMETHYLSTYRENE
26MUD	2,6-DIMETHYLUNDECANE
26DNA	2,6-DINITROANILINE
26DNT	2,6-DINITROTOLUENE
26HPCB	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL
2611MD	2,6,11-TRIMETHYLDODECANE
27DMO	2,7-DIMETHYLOCTANE
27DNAP	2,7-DIMETHYLNAPHTHALENE
29DMUD	2,9-DIMETHYLUNDECANE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

3BPETH	3-BUTENYL PENTYL ETHER
3CHXD	3-CYCLOHEXYLDECANE
3CLP	3-CHLOROPHENOL
3CMCH	3-(CHLOROMETHYL) CYCLOHEXENE
3DCHEO	3,5-DIMETHYL-2-CYCLOHEXEN-1-ONE
3EEBOD	3-ETHYL-5-(2-ETHYLBUTYL) OCTADECANE
3EE2BO	3,4-EPOXY-3ETHYL-2-BUTANONE
3EHXDE	3-ETHYL-1,4HEXADIENE
3EP	3-ETHYLPHENOL
3E22MP	3-ETHYL-2,2DIMETHYLPENTANE / 3-(T-BUTYL)-PENTANE
3E25DH	3-ETHYL-2,5DIMETHYL-3-HEXENE
3HDMPPL	3-(HYDROXYMETHYL)-4,4-DIMETHYLPENTANAL
3HDMPT	3-HYDROXY-2,7-DIMETHYL-4-[3H]-PTERIDINONE
3HXE20	3-HEXEN-2-ONE
3MBP	3-METHYLBIPHENYL
3MCHRY	3-METHYLCHRYSENE
3MEPEN	3-METHYLPENTANE
3MP	3-METHYLPHENOL / 3-CRESOL
3MPANR	3-METHYLPHENANTHRENE
3MUND	3-METHYLUNDECANE
3MX1MZ	3-METHOXylimidazole
3MXT	3-METHOXYTOLUENE
3M1PL	3-METHYL-1-PENTANOL
3M2CHO	3-METHYL-2-CYCLOHEXEN-1-ONE
3M2C10	3-METHOXY-2CYCLOPENTEN-1-ONE
3M2C5E	3-METHYL-2-PENTENE
3M2HEO	3-METHYL-2-CYCLOHEXEN-1-ONE
3M2HXL	3-METHYL-2-HEXANOL
3M5PNN	3-METHYL-5-PROPYLNONANE
3NT	3-NITROTOLUENE
3OCTOL	3-OCTANOL
3OPPAE	3-OXO-3-PHENYLPROPANOIC ACID, ETHYL ESTER
3PC3AC	3-PHENYLPROPANOYL CHLORIDE/HYDROXYCINNAMYL CHLORIDE
3PT	3-PROPYLTOLUENE
3S5E3L	(3BETA)-STIGMAST-5-EN-3-OL
3TBUP	3-(T-BUTYL)PHENOL
3TCHEO	3,5,5-TRIMETHYL-2-CYCLOHEXEN-1-ONE
33DCBD	3,3'-DICHLOROBENZIDINE
33DMHX	3,3-DIMETHYLHEXANE
33DMPN	3,3-DIMETHYLPENTANE
34CBD6	3,3',4,4'-TETRACHLOROBIPHENYL-D6
34DCLP	3,4-DICHLOROPHENOL
34DMP	3,4-DIMETHYLPHENOL
34D1DE	3,4-DIMETHYL-1-DECENE
344TPE	3,4,4-TRIMETHYL-2-PENTENE
345T1H	3,4,5-TRIMETHYL-1-HEXENE
35DMP	3,5-DIMETHYLPHENOL
35DNA	3,5-DINITROANILINE
35DNP	3,5-DINITROPHENOL
35DNT	3,5-DINITROTOLUENE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

35M3HL	3,5-DIMETHYL-3-HEXANOL
36DF90	3,6-DICHLOROFLUOREN-9-ONE
36TPA	3,4,5,6-TETRAMETHYLPHENANTHRENE
37DMNN	3,7-DIMETHYLNONANE
38DMUD	3,8-DIMETHYLUNDECANE
4AMORP	4-ACETYL MORPHOLINE
4A35DT	4-AMINO-3,5DINITROTOLUENE
4BFB	4-BROMOFLUOROBENZENE
4BRPPE	4-BROMOPHENYLPHENYL ETHER
4B3P20	4-BUTOXY-3-PENTEN-2-ONE
4CCHXL	4-CHLOROCYCLOHEXANOL
4CLPPE	4-CHLOROPHENYLPHENYL ETHER
4CL2C	2-METHYL-4-CHLOROPHENOL / 4-CHLORO-2-CRESOL
4CL3C	3-METHYL-4-CHLOROPHENOL / 4-CHLORO-M-CRESOL / 4-CHLORO-3-CRESOL
4C3MBE	4-CHLORO-3-METHYL-1-BUTENE
4DM2PL	4,4-DIMETHYL-2-PENTANOL
4ETMHP	4-ETHYL-2,2,6,6-TETRAMETHYLHEPTANE
4E2OCE	4-ETHYL-2-OCTENE
4FANIL	4-FLUOROANILINE
4FT	4-FLUOROTOLUENE
4HAZOB	4-HYDROXYAZOBENZENE
4HYBA	4-HYDROXYBENZALDEHYDE
4H3MBA	4-HYDROXY-3METHOXYBENZALDEHYDE / VANILLIN
4H35BA	4-HYDROXY-3,5-DIMETHOXYBENZALDEHYDE
4IOMQU	4-IODOMETHYLQUINULCIDINE
4MBP	4-METHYLBIPHENYL
4MBSA	4-METHYLBENZENE SULFONAMIDE
4MC7	4-METHYLHEPTANE
4MDBFU	4-METHYLDIBENZOFURAN
4MENPA	4-(1-METHYLETHYL)-N-PHENYLANILINE
4MFLRE	4-METHYL-9HFLUORENE
4MMBHE	4-METHYL-1-(1-METHYLETHYL)-BICYCLO [3.1.0] HEX-2-ENE
4MP	4-METHYLPHENOL / 4-CRESOL
4MPANR	4-METHYLPHENANTHRENE
4MPYR	4-METHYL PYRENE
4MXCHL	4-METHOXYCYCLOHEXANOL
4MXP	4-METHOXYPHENOL
4M2PPL	4-METHYL-2-PROPYL-1-PENTANOL
4NANIL	4-NITROANILINE
4NP	4-NITROPHENOL
4TBU2C	2-METHYL-4-(T-BUTYL)PHENOL / 4-T-BUTYL-2-CRESOL
4TOP	4-T-OCTYLPHENOL
41MEHP	4-(1-METHYLETHYL)HEPTANE
44DFBZ	4,4-DIFLUOROBENZOPHENONE
44DMPE	4,4-DIMETHYL-2-PENTENE
44DMUD	4,4-DIMETHYLUNDECANE
46DN2C	2-METHYL-4,6-DINITROPHENOL / 4,6-DINITRO-2-CRESOL
46BTIN	4,6,8-TRIMETHYL-1-NONENE
47DMUD	4,7-DIMETHYLUNDECANE
48DMHD	4,8-DIMETHYLHENDECANE

*** FIELD DEFINITIONS ***

*** TEST-NAME ***

SCL2C	5-CHLORO-O-CRESOL / 2-METHYL-5-CHLOROPHENOL
SE2MHP	5-ETHYL-2-METHYLHEPTANE
SE5MD	5-ETHYL-5-METHYLDECANE
SM2HXO	5-METHYL-2-HEXANONE
SM5HAL	5-METHYL-5-HYDROXYHEXANOIC ACID LACTONE
SN2OL	5-NORBORN-2-OL
SPTRID	5-PROPYLTRIDECANE
SOH50A	50%HEXANE-50%ACETONE
SOHMAN	50%WATER-25%METHANOL-25%ACETONITRILE
6CL3C	3-METHYL-6-CHLOROPHENOL / 6-CHLORO-3-CRESOL
6E6MFV	6-ETHYL-6-METHYLFULVENE
6MEPUR	6-METHYLPURINE
6MTRID	6-METHYLTRIDECANE
6M3HPL	6-METHYL-3-HEPTANOL
6TBU2C	2-METHYL-6-(<i>T</i> -BUTYL)PHENOL / 6- <i>T</i> -BUTYL-2-CRESOL
7MTRID	7-METHYLTRIDECANE
8MNNDL	8-METHYL-1,8-NONANEDIOL
9FLENO	9-FLUORENONE
9MBAAN	9-METHYLBENZ [A] ANTHRACENE
9MXANT	9-METHOXYANTHRACENE

ALPHABETIC SORT BY TEST-NAMES:

ANAPNE	ACENAPHTHENE
ANAPYL	ACENAPHTHYLENE
AACHXE	ACETIC ACID, CYCLOHEXYL ESTER
C2AVE	ACETIC ACID, VINYL ESTER / VINYL ACETATE
ACET	ACETONE
CH3CN	ACETONITRILE
ACPHN	ACETOPHENONE
ACIDIT	ACIDITY
ACDHMW	ACIDS (HIGH MOLECULAR WEIGHT)
ACROLN	ACROLEIN
ACRYLO	ACRYLONITRILE
DM	ADAMSITE
ALHHMW	ALCOHOLS (HIGH MOLECULAR WEIGHT)
ALDEHY	ALDEHYDES
ALDRN	ALDRIN
ALAL	ALIPHATIC ALCOHOL
ALHC	ALIPHATIC HYDROCARBON
ALK	ALKALINITY
ALKBIC	ALKALINITY BICARBONATE
ALKCAR	ALKALINITY CARBONATE
ALKHYD	ALKALINITY HYDROXIDE
ALKN	ALKANE
AYLETH	ALLYL ETHER
ABHC	ALPHA-BENZENEHEXACHLORIDE / ALPHA-HEXACHLOROCYCLOHEXANE

LAB	METH	METHOD NAME	MED	UNI	CER	CERTDATE	CERTIFIED	REPORTING	MAXIMUM TEST	Possible NAME	QC	QC	QC	QC	QC	
LAB	METH	METHOD NAME	MED	UNI	T	TS	LVL	CONC	NAME	LOW	LOW	HIGH	HIGH	HIGH	LOW	
ET	J99	METALS/SOIL/CVAA	99	01/01/85	0.000000				0.0000		0	0.00	0	0.00	0	
ET	JB02	METALS/SOIL/GFAA	SO	UGG	C1	09/29/86	0.200000	0.200000	HB	1.00	1.00	1.00	1.00	1.00	-2	
ET	JD04	METALS/SOIL/GFAA	SO	UGG	C1	09/29/86	0.042000	0.042000	AG	1.00	1.00	1.00	1.00	1.00	-2	
ET	JB04	METALS/SOIL/GFAA	SO	UGG	C1	09/29/86	0.075000	0.075000	BE	2.50	2.50	2.50	2.50	2.50	-2	
ET	JD04	METALS/SOIL/GFAA	SO	UGG	C1	09/29/86	0.350000	0.350000	PB	7.50	7.50	7.50	7.50	7.50	-1	
ET	JD04	METALS/SOIL/GFAA	SO	UGG	C1	09/29/86	0.085000	0.085000	SB	2.50	2.50	2.50	2.50	2.50	-1	
ET	JE01	METALS/SOIL/HYAA	90	UGG	C1	09/29/86	0.120000	0.120000	TL	7.50	7.50	7.50	7.50	7.50	-1	
ET	JE01	METALS/SOIL/HYAA	90	UGG	C1	09/29/86	0.150000	0.150000	AS	1.00	1.00	1.00	1.00	1.00	-1	
ET	JB02	METALS/SOIL/ICPLASMA	SO	UGG	C1	11/25/86	0.170000	0.170000	SE	2.50	2.50	2.50	2.50	2.50	-1	
ET	JS02	METALS/SOIL/ICPLASMA	SO	UGG	C1	11/25/86	0.600000	0.600000	BA	10.0000	10.0000	10.0000	10.0000	10.0000	-1	
ET	JB02	METALS/SOIL/ICPLASMA	SO	UGG	C1	11/25/86	0.540000	0.540000	CD	5.00	5.00	5.00	5.00	5.00	-1	
ET	JB02	METALS/SOIL/ICPLASMA	SO	UGG	C1	11/25/86	1.000000	1.000000	CR	100.0000	100.0000	100.0000	100.0000	100.0000	-1	
ET	JB02	METALS/SOIL/ICPLASMA	SO	UGG	C1	11/25/86	3.500000	3.500000	CU	1.00	1.00	1.00	1.00	1.00	-1	
ET	JB02	METALS/SOIL/ICPLASMA	SO	UGG	C1	11/25/86	3.500000	3.500000	N1	1.90	1.90	1.90	1.90	1.90	-1	
ET	KF01	ANIMONS/SOIL/TECHICON	SO	UGG	C1	10/07/86	11.100000	11.100000	ZN	5.00	5.00	5.00	5.00	5.00	-1	
ET	KF03	CYANIDE/SOIL/TECHICON	90	UGG	C1	04/16/87	0.148000	0.148000	NIT	1.00	1.00	1.00	1.00	1.00	-1	
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.008680	0.008680	ABHC	N	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.009740	0.009740	ALDRN	0.00	0.00	0.00	0.00	0.00	-1	
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.002480	0.002480	DLDNN	0.00	0.00	0.00	0.00	0.00	-1	
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.002370	0.002370	ENDRN	0.00	0.00	0.00	0.00	0.00	-1	
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.008650	0.008650	HPCL	N	1.50	1.50	1.50	1.50	1.50	-1
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.007570	0.007570	LIN	0.00	0.00	0.00	0.00	0.00	-1	
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.026500	0.026500	MLTHM	N	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.052000	0.052000	PCB016	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.067500	0.067500	PCB260	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.004840	0.004840	PPDD	N	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.002000	0.002000	PPDDE	N	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	PESTICIDES/SOIL/BCEC	SO	UGG	C1	01/14/87	0.002510	0.002510	PPDDT	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	VOLATILES/SOIL/GCMS	SO	UGG	C1	11/26/86	1.030000	1.030000	PCB017	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	VOLATILES/SOIL/GCMS	SO	UGG	C1	11/26/86	0.226000	0.226000	PCB261	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	VOLATILES/SOIL/GCMS	SO	UGG	C1	11/26/86	0.900000	0.900000	CD2CL2	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	VOLATILES/SOIL/GCMS	SO	UGG	C1	11/26/86	0.095000	0.095000	ETBR010	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	VOLATILES/SOIL/GCMS	SO	UGG	C1	11/26/86	0.998000	0.998000	MEC598	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH01	VOLATILES/SOIL/GCMS	SO	UGG	C1	11/26/86	0.144000	0.144000	TCLE	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH04	ORGANICS/SOIL/GCMS	SO	UGC	C1	01/06/87	0.300000	0.300000	TCLE019	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANICS/SOIL/GCMS	SO	UGC	C1	01/06/87	4.700000	4.700000	TCLE020	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANICS/SOIL/GCMS	SO	UGC	C1	01/06/87	2.600000	2.600000	TCLE021	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANICS/SOIL/GCMS	SO	UGC	C1	01/06/87	2.100000	2.100000	2FBP	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANICS/SOIL/GCMS	SO	UGC	C1	01/06/87	2.800000	2.800000	TCLE022	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.830000	0.830000	DEPC4	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.200000	0.200000	DNODD4	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.300000	0.300000	NBDS	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.500000	0.500000	PHEND6	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.300000	0.300000	TCLE014	Y	1.00	1.00	1.00	1.00	1.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.300000	0.300000	135TB	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.300000	0.300000	LC2ND	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.200000	0.200000	246TN7	Y	0.00	0.00	0.00	0.00	0.00	-1
ET	LH04	ORGANONITRATES/SOIL/HFLC	SD	UGS	C1	09/15/86	0.400000	0.400000	24EN7	Y	0.00	0.00	0.00	0.00	0.00	-1

LAB	METH NUM	METHOD NAME	MED	UNI TA	CER TSD	CERT DATE	CERTIFIED REPORTING LIMIT	MAXIMUM TEST POSSIBLE NAME			QC NM	QC HIGH	QC LOW	QC MAN	QC EXP
								CONC	NAME	CONC					
ET	LW01	ORGANONITRATES/SOIL/HPLC	SD	UGL	C1	09/15/86	0.540000	5.	26DNT	0.00	0.00	0.00	0.00	0.00	
ET	LW01	ORGANONITRATES/SOIL/HPLC	SD	UGL	C1	09/15/86	9.200000	40.	HPLX	0.00	0.00	0.00	0.00	0.00	
ET	LW01	ORGANONITRATES/SOIL/HPLC	SD	UGL	C1	09/15/86	9.200000	40.	NB	0.00	0.00	0.00	0.00	0.00	
ET	LW01	ORGANONITRATES/SOIL/HPLC	SD	UGL	C1	01/05/87	6.690000	200.	RDX	0.00	0.00	0.00	0.00	0.00	
ET	LW01	ORGANONITRATES/SOIL/HPLC	SD	UGL	C1	08/06/87	2.810000	10.	TETRYL	0.00	0.00	0.00	0.00	0.00	
ET	SBD02	METALS/WATER/CVAAS	WA	UGL	C1	09/29/86	1.100000	10.	HG	5.00	2.00	2.00	2.00	2.00	
ET	SCO1	METALS/WATER/AAS	WA	UGL	C1	09/23/86	450.000000	4000.	NA	4.00	1.00	1.00	1.00	1.00	
ET	SDD04	METALS/WATER/BFAA	WA	UGL	C1	09/29/86	0.140000	4.	AG	1.40	0.80	0.80	0.80	0.80	
ET	SDD04	METALS/WATER/BFAA	WA	UGL	C1	09/29/86	0.830000	20.	BE	8.00	1.60	1.60	1.60	1.60	
ET	SDD04	METALS/WATER/BFAA	WA	UGL	C1	09/29/86	1.500000	20.	PB	1.50	3.00	3.00	3.00	3.00	
ET	SDD04	METALS/WATER/BFAA	WA	UGL	C1	09/29/86	7.000000	50.	SB	7.00	1.40	1.40	1.40	1.40	
ET	SDD04	METALS/WATER/BFAA	WA	UGL	C1	09/29/86	1.700000	20.	TL	1.00	2.00	2.00	2.00	2.00	
ET	SE01	METALS/WATER/HYAA	WA	UGL	C1	09/29/86	2.450000	40.	AS	2.50	1.00	1.00	1.00	1.00	
ET	SE01	METALS/WATER/HYAA	WA	UGL	C1	09/29/86	2.500000	50.	SE	2.50	5.00	5.00	5.00	5.00	
ET	SS02	METALS/WATER/ICPLASMA	WA	UGL	C1	11/25/86	3.400000	200.	BA	3.00	4.00	4.00	4.00	4.00	
ET	SS02	METALS/WATER/ICPLASMA	WA	UGL	C1	11/25/86	11.900000	1000.	CD	1.00	2.00	2.00	2.00	2.00	
ET	SS02	METALS/WATER/ICPLASMA	WA	UGL	C1	11/25/86	10.800000	900.	CR	1.00	2.00	2.00	2.00	2.00	
ET	SS02	METALS/WATER/ICPLASMA	WA	UGL	C1	11/25/86	21.300000	2000.	CU	2.00	4.00	4.00	4.00	4.00	
ET	SS02	METALS/WATER/ICPLASMA	WA	UGL	C1	11/25/86	65.200000	400.	N1	6.00	1.20	1.20	1.20	1.20	
ET	SS02	METALS/WATER/ICPLASMA	WA	UGL	C1	11/25/86	14.300000	700.	ZN	4.00	8.00	8.00	8.00	8.00	
ET	TF02	ANIONS/WATER/TECHICON	WA	UGL	C1	10/07/86	244.000000	2000.	BR	2.00	5.00	5.00	5.00	5.00	
ET	TF03	ANIONS/WATER/TECHICON	WA	UGL	C1	10/07/86	5000.000000	150000.	CL	5.00	1.00	1.00	1.00	1.00	
ET	TF04	ANIONS/WATER/TECHICON	WA	UGL	C1	09/23/86	4720.000000	75000.	SO4	5.00	1.00	1.00	1.00	1.00	
ET	TF05	ANIONS/WATER/TECHICON	WA	UGL	C1	09/23/86	29.500000	300.	CYN	2.50	1.00	1.00	1.00	1.00	
ET	TF06	ANIONS/WATER/TECHICON	WA	UGL	C1	09/23/86	56.900000	1000.	PO4ART	4.00	2.00	2.00	2.00	2.00	
ET	TF07	PHENOLS/WATER/TECHICON	WA	UGL	C1	09/23/86	870.000000	3000.	PHENOL	4.00	2.00	2.00	2.00	2.00	
ET	TF08	ANIONS/WATER/TECHICON	WA	UGL	C1	10/07/86	24.000000	2000.	NIT	5.00	1.00	1.00	1.00	1.00	
ET	TU01	ANIONS/WATER/ELECTRODE	WA	UGL	C1	08/12/86	360.000000	10000.	F	5.00	1.00	1.00	1.00	1.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.170000	1.2500	ALDRN	1.50	3.00	3.00	3.00	3.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.150000	1.2500	DLDRN	1.50	3.00	3.00	3.00	3.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.250000	2.5000	EDRN	3.00	4.00	4.00	4.00	4.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.500000	2.5000	HPCL	1.50	3.00	3.00	3.00	3.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.160000	1.2500	LIN	1.50	3.00	3.00	3.00	3.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.150000	1.2500	PCB016	1.50	2.40	2.40	2.40	2.40	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.150000	2.5000	PCP260	2.50	5.20	5.20	5.20	5.20	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.500000	2.5000	PPDD	1.50	3.00	3.00	3.00	3.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.160000	2.5000	PPDD	1.50	3.00	3.00	3.00	3.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.270000	2.5000	PPDD	1.50	3.00	3.00	3.00	3.00	
ET	UH01	PESTICIDES/WATER/BCEC	WA	UGL	C1	12/16/86	0.160000	1.2500	DTIP	4.00	3.00	3.00	3.00	3.00	
ET	UK01	ORGANO-NOPHOSPHO/WATER/BCECP	WA	UGL	C1	07/24/87	22.200000	40.	DTIP	4.00	3.00	3.00	3.00	3.00	
ET	UL01	ORGANOSULFURS/WATER/SCFF	WA	UGL	C1	12/28/86	7.5.000000	25.	CPMS	1.20	0.0000	0.0000	0.0000	0.0000	
ET	UL01	ORGANOSULFURS/WATER/GCFF	WA	UGL	C1	12/29/86	0.270000	2.5000	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	
ET	UL01	ORGANOSULFURS/WATER/GCFF	WA	UGL	C1	12/29/86	0.220000	2.5000	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	
ET	UL01	VOLATILES/WATER/BCMS	WA	UGL	C1	07/14/86	0.270000	2.5000	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	
ET	UL01	VOLATILES/WATER/BCMS	WA	UGL	C1	07/14/86	6.700000	50.	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	
ET	UL01	VOLATILES/WATER/BCMS	WA	UGL	C1	07/14/86	5.800000	40.	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	
ET	UL01	VOLATILES/WATER/BCMS	WA	UGL	C1	07/14/86	1.500000	200.	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	
ET	UL01	VOLATILES/WATER/BCMS	WA	UGL	C1	07/14/86	1.500000	200.	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	
ET	UL01	VOLATILES/WATER/BCMS	WA	UGL	C1	07/14/86	1.500000	200.	CPMS	1.00	0.0000	0.0000	0.0000	0.0000	

LISTING OF METHODS TABLE FOR EA ENGINEERING
(LISTING OF \IRSCC\METHODS.DBF USING \DBASE\METHODTAB.FRM)

LAB METH NUM	METHOD NAME	MED	UNI	CER CERTDATE	CERTIFIED REPORTING LIMIT	MAXIMUM TEST POSSIBLE NAME CONC	QC		
							NC	HIGH MAN	LOW EXP
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	2.300000	200.0000 13DBDA	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	>4.600000	200.0000 246TBP	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	2.200000	200.0000 2CLPDA	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	1.800000	100.0000 2FBP	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	1.100000	20.0000 ZFP	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	>2.200000	200.0000 DEPD4	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	2.500000	200.0000 DNDPDA	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	6.400000	100.0000 NB5	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	3.900000	200.0000 PHEND6	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	1A 10/20/86	7.400000	100.0000 TRP14	Y	1.00	0.00
ET UMO2	ORGANICS /WATER/GC/MS	WA	UGL	C1 11/18/86	5.840000	100.0000 13STNB	Y	0.00	0.00
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 11/18/86	9.080000	80.0000 13DNB	Y	4.00	0.00
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 11/18/86	4.250000	100.0000 246NT	Y	0.00	0.00
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 11/18/86	2.220000	20.0000 24DNT	Y	0.00	0.00
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 11/18/86	5.700000	80.0000 26DNT	Y	4.00	0.00
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 11/18/86	5.070000	200.0000 HMX	Y	1.00	2.00
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 08/05/87	6.500000	20.0000 NB	Y	0.00	0.00
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 11/18/86	4.190000	160.0000 RDX	Y	0.00	1.40
ET UMO2	ORGANONITRATE/WATER/HPLC	WA	UGL	C1 11/18/86	4.390000	80.0000 TETRYL	Y	4.00	0.00
ET UMO3	ORGANO SULFURS/WATER/HPLC	WA	UGL	C1 12/12/86	720.000000	1600.0000 TDGCL	Y	7.00	1.40